CONSTRUCTION QUALITY CONTROL PLAN

Old American Zinc Plant Superfund Site Surrounding Properties Remedial Design

ST. CLAIR COUNTY, IL

REVISION 0.0

IN SUPPORT OF

CONTRACT NO: W912P9-18-D-0014

15 April 2019

PREPARED FOR



US Army Corps of Engineers – St. Louis District

1222 Spruce Street St. Louis, MO 63103-2822

PREPARED BY



ARDL, Inc.

400 Aviation Drive, P.O. Box 1566 Mount Vernon, IL 62864

Signature Sheet

| Prepared by: | |
|--|---|
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| | |
| Reviewed by: | _Date:_ <u>10 April 2019</u> |
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| Approved by: Ullerie Lenkins | Date: <u>10 April 2019</u> |
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Introduction

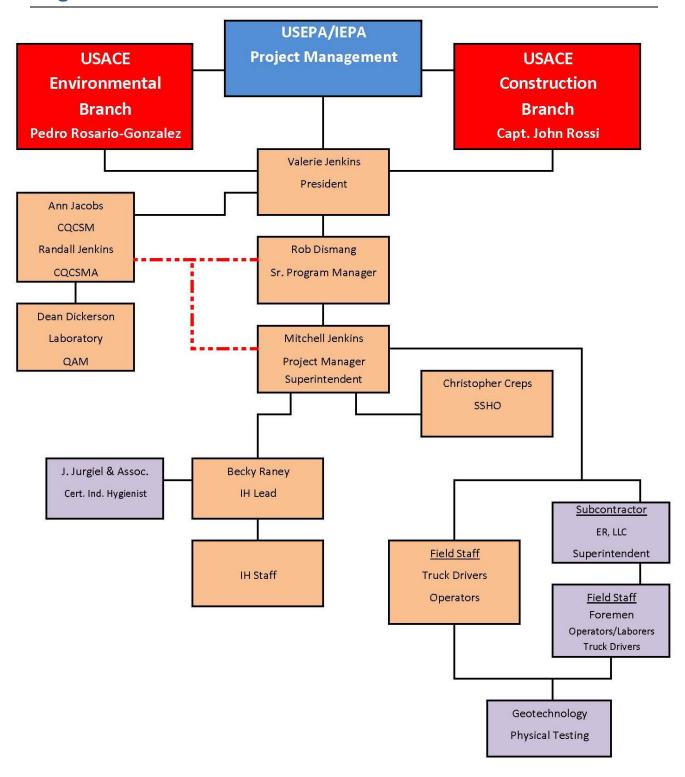
ARDL, Inc. (ARDL) has prepared the following Quality Control Plan (QCP) for the construction of the Old American Zinc Plant Superfund Site Surrounding Properties Remedial Design project in St. Clair County, IL. The project consists of: remediation of select portions of residential properties and alleyways contaminated with certain heavy metals; and, restoration of these properties with clean soil and plantings (yard areas) and compacted base and rock in the alleyways.

The Project Organization Chart below shows the Quality Control (QC) staff with lines of authority. This organization shall execute the USACE three-phase control system.

ARDL considers QC an important part of the project to ensure that all work is completed according to the contract documents. Deficiencies from the plans and specifications must be detected immediately and the proper action taken.

The overall management of Contractor Quality Control (CQC) will be the responsibility of the Construction Quality Control Systems Manager (CQCSM). The CQCSM, or an appointed alternate, will have the authority to act in all construction quality control matters and will be responsible for ensuring that all materials and work comply with the contract plans and specifications. All inspection and testing firms will be at the disposal of the CQCSM to ensure that all aspects of this work are compliant with the contract.

Organizational Chart



Resumes and Responsibilities

This section describes the organization and authority of project personnel, including subcontractors. The organizational structure, functional responsibilities, levels of authority, and lines of communication have been established within the organization to ensure high-quality work. A CQC project organization chart is shown on the preceding page and the responsibilities and authorities of the key personnel for QC are described in the following paragraphs.

Senior Program Manager (SPM) - Robert Dismang

The PM is granted authorization to act on behalf of ARDL in all matters of Construction Management and will function as corporate manager of the project activities performed under this Work Order and for its successful completion. The SPM's duties and authorities include:

- Performing overall project management/control
- Ensuring the overall project scope, work requirements, and goals are fulfilled
- Management oversight of the project cost and schedule
- Providing formal technical direction to the project team as needed

Project Manager/Superintendent (PM/S) - Mitchell Jenkins

The PM/S will report directly to the SPM and has the same responsibility and authority as the SPM in his absence. The PM/S is granted authorization to act on behalf of ARDL in matters of Construction Management and will function as the day-to-day manager of the project activities performed under this Work Order and is responsible for its successful completion. The PM/S duties and authorities include:

- Performing project management
- Ensuring the project scope and work requirements are fulfilled
- Overseeing the project cost and schedule
- Leading the project team in completion of all contract construction requirements

Construction Quality Control Systems Manager (CQCSM) - Ann Jacobs

The CQCSM will report directly to the President and has the responsibility and authority to perform the following:

- Implement the three-phase control system for all definable features of work
- Day-to-day inspection of the work
- Daily QC reports
- Ensure all work meets contract requirements
- Maintain document control
- Establish and maintain the CQC program for the project
- Oversee the QC program, including data acquisition
- Work directly with USACE, EPA, Property Owners, and Contractor to ensure implementation of the CQC Plan
- Act as the focal point for coordination of all QC project-related matters and resolve all QC issues
- Provide QC direction and training to others performing QC functions
- Suspend project activities if quality standards are not maintained
- Perform reviews of audit and surveillance reports conducted by others
- Maintain RMS

Construction Quality Control Systems Manager Alternate (CQCSMA) - Randall Jenkins

The CQCSMA will report directly to the President and has the same responsibility and authority as the CQCSM in her absence.

Material Testing Services

Geotechnology, Inc. will conduct material testing services (as needed) to ensure full compliance with the plans and specifications. Reports will be signed by an authorized official of the testing laboratory that a material, product, or system identical to the material, product, or system to be provided has been tested in accordance with specified requirements; report which includes findings of a test required to be performed by the Contractor on an actual portion of the work or prototype prepared for the project before shipment to job site; and report which includes finding of a test made at the job site or on a sample taken from the job site, on portion of work during or after installation, including investigation reports, daily logs and checklists, final acceptance test, and operation test procedures reports.

USACE Representative

Corps Project Engineer, Capt. John Rossi, is the point of contact for the USACE.

Resumes attached in Appendix A include:

ARDL Staff

Robert Dismang – Senior Program Manager
Mitchell Jenkins – Project Manager/Superintendent
Ann Jacobs – Construction Quality Control Systems Manager
Randall Jenkins – Construction Quality Control Systems Manager Alternate

Letter of Authorization

Date:

April 15, 2019

Project:

W912P9-18-D-0014, Old American Zinc Plant Superfund Site

Surrounding Properties Remedial Design

From:

Valerie Jenkins, President

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To:

Ann Jacobs, CQCSM

Subject:

Construction Quality Control Systems Manager

This Letter of Authorization outlines your responsibility as our site Construction Quality Control Systems Manager (CQCSM) for the project referenced above. As the CQCSM, you shall report directly to me. You shall review the specifications, amendments, plans and drawings in their entirety and implement the Contractor Quality Control (CQC) Plan. This plan encompasses the three phase Inspection: Preparatory Meetings, Initial and Follow-Up Inspections. All inspections and testing shall be recorded in the daily reports and submitted to the Project Manager. Test reports shall be submitted no later than three official work days after the test was performed. You and/or your staff shall be responsible for reviewing specifications, as-built plans, and shop drawings for compliance to the contractual requirements. You are also responsible for maintaining the submittals and submittal register. This includes preparing submittals, modifying and amending them during the approval process, and ensuring the submittal register is up to date and complete at all times. Additionally, this applies to all subcontractor documents.

You and/or your staff shall make daily inspections to ensure that the workmanship and materials used in the construction of the project are in compliance with the plans, drawings, and specifications. You are authorized to stop work that does not comply with the plans and specifications. You and/or your staff shall witness all tests required by the specifications and coordinate such tests with the US Army Corps of Engineers as necessary by specification. You and your staff must document all non-conforming conditions, items and/or workmanship noted, and will constantly monitor and alert safety staff members to safety violations. If at any time you should require assistance with the implementation of the CQC plan, please contact the Project Manager.

UUULL Valerie Jenkins

President

Letter of Authorization

Date:

April 15, 2019

Project:

W912P9-18-D-0014, Old American Zinc Plant Superfund Site

Surrounding Properties Remedial Design

From:

Valerie Jenkins, President

To:

Randall K. Jenkins, CQCSMA

Subject:

Construction Quality Control Systems Manager Alternate

This Letter of Authorization outlines your responsibility as our site Construction Quality Control Systems Manager (CQCSM) for the project referenced above. As the CQCSM, you shall report directly to me. You shall review the specifications, amendments, plans and drawings in their entirety and implement the Contractor Quality Control (CQC) Plan. This plan encompasses the three phase Inspection: Preparatory Meetings, Initial and Follow-Up Inspections. All inspections and testing shall be recorded in the daily reports and submitted to the Project Manager. Test reports shall be submitted no later than three official work days after the test was performed. You and/or your staff shall be responsible for reviewing specifications, as-built plans, and shop drawings for compliance to the contractual requirements. You are also responsible for maintaining the submittals and submittal register. This includes preparing submittals, modifying and amending them during the approval process, and ensuring the submittal register is up to date and complete at all times. Additionally, this applies to all subcontractor documents.

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Sincerely,

Valerie Jenkin

President

Three Phase Control System

Preparatory Phase

Preparatory - This phase will identify those areas of work that are scheduled for execution. This will allow the QC personnel to discuss any issues regarding the plans, specifications, submittals, materials, testing plan, and work method as they relate to the schedule.

Preparatory Meetings shall be performed prior to the beginning of any major definable feature of work. A meeting shall be held for each crew performing the feature or when members of the crew change. Preparatory Meetings shall be conducted by the CQCSM and/or designee after a complete review of all applicable construction drawings, specifications, shop drawings and related submittals have been made. At the Preparatory Meeting, the Superintendent and Foreman (involved in this phase of construction) shall coordinate with QC personnel and shall introduce their plan for accomplishing the work. A USACE Representative shall also be invited to this meeting.

- a. Review of applicable specifications.
- b. Review of contract drawings.
- c. Review of related submittals and a check that all related submittals, shop drawings, and materials have been tested (if applicable), submitted, and approved.
- d. A check to assure that provisions have been made for required quality control inspections and testing.
- e. Examination of the work area to ensure that all required preliminary work has been completed and is in compliance with the contract.
- f. A physical examination of required materials, equipment, and sample work to assure that they are on hand, conform to approved shop drawings or submitted data, and are properly stored.
- g. A review of the appropriate activity hazard analysis to insure safety requirements are met.
- h. Discussion of procedures for constructing the work including repetitive deficiencies. Document construction tolerances and workmanship standards for that phase of work.
- i. A check to ensure that the portion of the plan for the work to be performed has been accepted.
- j. The results of the preparatory phase actions shall be documented by separate minutes prepared by the QC Manager and attached to the daily QC report. The CQCSM shall instruct applicable workers as to the acceptable level or workmanship required in order to meet contract specifications. The QC report shall be submitted to the Project Manager.

Initial Phase

Initial - This section will discuss work previously identified in the preparatory phase and actively being performed that day. The form will also detail the testing being performed to ensure QC.

Initial Inspections shall be performed at the beginning of any definable feature of work and must be repeated at any time new workmen or new crews are assigned to the work or if the required standard of work is not being met. Personnel who attended the Preparatory Meeting shall also attend the Initial Inspection. USACE Representative shall also be invited to this meeting. The following shall be accomplished during such meetings:

- a. Review minutes of the Preparatory Meeting and verify that the work complies with the contract documents; i.e., submittals, specifications, blueprints, and/or shop drawings.
- b. Verification of full contract compliance. Verify required control inspection and testing.
- c. Establish a level of workmanship and verify that it meets the minimum acceptable workmanship standards. Comparison with sample panels is appropriate.
- d. Resolve all differences.
- e. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.
- f. Separate minutes of this phase shall be prepared by the QC Manager and attached to the daily QC report. The exact location of initial phase shall be indicated for future reference and comparison with follow-up phases.
- g. The initial phase should be repeated for each new crew to work on-site, or any time acceptable specified quality standards are not being met.

Follow-up Phase

Daily checks shall be performed to assure continuing compliance with contract requirements, including control testing, until completion of the particular feature of work. The checks shall be made a matter of record in the QC documentation. Final follow-up checks shall be conducted and all deficiencies corrected prior to the start of additional features of work which may be affected by the deficient work. The Contractor shall not build upon or conceal non-conforming work.

Testing and Reporting

The QC personnel shall perform specified or required tests to verify that control measures are adequate to provide a product that conforms to contract requirements. Testing includes operation and/or acceptance tests when specified. The QC personnel shall procure the services of a testing lab on or off site that is validated by the Material Testing Center for the Corps of Engineers. The Contractor shall perform the following activities and record and provide the following data:

- a. Verify that testing procedures comply with contract requirements.
- b. Verify that facilities and testing equipment are available and comply with testing standards.
- c. Check test instrument calibration data against certified standards.
- Verify that recording forms and test documentation requirements have been prepared.
- e. Results of all tests taken, both passing and failing, shall be recorded on the QC report for the date taken, and the sequential control number identifying the test shall be given. If approved by the Project Manager, actual test reports may be submitted later with a reference to the test number and date taken. Failure to submit timely test reports as stated may result in nonpayment for related work performed and disapproval of the test facility for this contract.

Information recorded on the daily quality control report will include:

- Definable features of work that was addressed.
- Description of trades working on the project.
- Number of personnel.
- Weather conditions.
- Types and numbers of tests performed.
- Results of testing.
- Nature of defects or cause for rejection.
- Proposed corrective action(s).
- Corrective action taken and date.
- Delays encountered.
- Directions received from USACE and actions taken.
- Health and safety issues or deficiencies and how they were resolved.
- Deficiencies.

The QC Team will have on-site representatives to inspect the work and observe for compliance with the plans and specifications.

Testing Labs

Physical Testing Laboratory

Geotechnology, Inc. 11816 Lackland Road, Ste. 150 St. Louis, MO 63146 (314) 997-7440

Expiration Date: March 1, 2020

Aggregate: ASTM C117, C123, C127, C128, C136, C29, C40, C131, C142, C535, C566, C702, C1077, C1252, D75, D2419, D3666, D4791, D5821, and E329.

Bituminous: ASTM D2041, D2726, D2950, D3203, D3666, D5444, D6307, D6926, D6927, and E329.

Concrete: C31, C39, C138, C143, C172, C173, C231, C1064, C78, C192, C511, C617, C1074, C1077, C1218, C1231, and E329

Soils: ASTM D421, D422, D698, D854, D1140, D1556, D1557, D1883, D2166, D2216, D2435, D2487, D2488, D2850, D2937, D3740, D4318, D4546, D4767, D4972, D5084, D6913, D6938, and E329.

AASHTO Accredited

Chemical Testing Laboratory

ARDL, Inc. 400 Aviation Drive P. O. Box 1566 Mount Vernon, IL 62864 (618) 244-3235

DOD ELAP

Expiration Date: 7/31/19

NELAP

Expiration Date: 4/30/19

See Appendix B for Certifications

31 23 23 - Backfill Materials

Chemical Analyses - Submit the compliance samples to the laboratory for testing for the following analyses:

- 1. Target compound list (TCL) organics (volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs)), TCL pesticides, TCL polychlorinated biphenyls (PCBs), herbicides, and target analyte list (TAL) metals.
- 2. Fertility and salinity will also be analyzed for topsoil samples.

After borrow source(s) are identified and approved, collect continued compliance samples throughout the project at a frequency of one sample per 1,000 cubic yards. The materials must also meet the Illinois Clean Fill Operations criteria (IAC 35 Part 1100) to be determined to be "clean".

Physical Testing - Collect one sample per 1,000 cubic yards of backfill material for gradation analysis and standard proctor when identifying borrow source(s) to be used for backfill. Additionally, the following must be met:

GENERAL BACKFILL

- A. In accordance with IDOT Standard Specifications for Road and Bridge Construction, Sections 204 and 205, and in accordance with Table 8.4-1 of the IDOT Geotechnical Manual.
- B. Free from rocks larger than 3 inches, from roots, peat, and other organic matter, ashes, cinders, trash, debris, and other deleterious materials.
- C. Will not contain more than 10 percent gravel, stones, or shale particles.

GRANULAR FILL (IF REQUIRED)

- A. 1-inch minus crushed gravel or crushed rock.
- B. Free from dirt, clay balls, and organic material.
- C. Well graded from coarse to fine and containing sufficient fines to bind material when compacted, but with maximum 8 percent by weight passing No. 200 sieve.

GRAVEL

- A. Free from clods, organic matter, or other deleterious material.
- B. Provide materials in accordance with current IDOT Standard Specifications for Road and Bridge Construction, gradation CA-6.
- C. Physical Qualities: Per Section 1004 of the IDOT Standard Specifications for Road and Bridge Construction.
- D. Gradation: Per 1004 of the IDOT Standard Specifications for Road and Bridge Construction.

STABILIZATION ROCK

- A. Free from clods, organic matter, or other deleterious material.
- B. Provide materials in accordance with current IDOT Standard Specifications for Road and Bridge Construction, gradation CA-1, or alternative material approved by Owner's Representative.
- C. Gradation: Per 1004 of the IDOT Standard Specifications for Road and Bridge Construction.

Compaction Testing - Perform two compaction tests, in place, per lift per yard area, unless directed otherwise by the Owner's Representative. Locations of compaction tests will be spread out over the footprint of the area being backfilled. Owner's Representative may direct Contractor to perform additional compaction testing, at no additional cost, for quality assurance on a random basis in a manner to minimize interruption to backfill and compaction operations. The compaction tests will be performed in accordance with ASTM D698.

32 91 13 - Topsoil Preparation

Chemical Analyses - Submit the compliance samples to the laboratory for testing for the following analyses:

- 1. Target compound list (TCL) organics (volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs)), TCL pesticides, TCL polychlorinated biphenyls (PCBs), herbicides, and target analyte list (TAL) metals.
- 2. Fertility and salinity will also be analyzed for topsoil samples using the AgSource Harris 'Diagnostic Test'.

After borrow source(s) are identified and approved, collect continued compliance samples throughout the project at a frequency of one sample per 1,000 cubic yards. The materials must also meet the Illinois Clean Fill Operations criteria (IAC 35 Part 1100) to be determined to be "clean".

Physical Testing - Collect one sample per 1,000 cubic yards of backfill material for gradation analysis and standard proctor when identifying borrow source(s) to be used for backfill. Additionally, the following must be met:

TOPSOIL

- A. Topsoil will be free from objects larger than 1 inch maximum dimension, and free of subsoil, roots, grass, other foreign matter, hazardous or toxic substances, and deleterious material that may be harmful to plant growth or may hinder grading, planting, or maintenance.
- B. Topsoil will consist of humus-bearing soils adapted to the sustenance of plant life.
- C. Topsoil borrow will range from a silt loam, loam, clay loam, sandy clay loam, or sandy loam soils for general use as a turf growing medium. The Contractor will collect samples with the Owner's Representative, for gradation analysis when identifying borrow source(s) to be used for topsoil. Topsoil will meet the requirements as described below:
 - i. Material passing No. 4 inch sieve: ≥85 percent.
 - ii. Sand: 10 75 percent passing No. 10 sieve.
 - iii. Silt: 5 70 percent, 0.05 0.002 mm diameter.
 - iv. Clay: 5 35 percent, less than 0.002 mm diameter.
 - v. pH: 6.1 7.8.
 - vi. Organic matter 3 to 15 percent of dry weight as determined in accordance with ASTM D2974.
 - vii. Largest materials size dimension not to exceed 2.5 inches.

SELECT TOPSOIL

Select topsoil will consist mostly of a loam ranting into sandy clay loam, sandy loam, silt loam, and clay loam soils, as a plant growing medium for landscape and planting beds. The Contractor will collect samples with the Owner's Representative, for gradation analysis when identifying borrow source(s) to be used for select topsoil. Select topsoil will meet the requirements as described below. Select topsoil may be amended with peat, as needed, to obtain the required organic matter content.

- i. Material passing 3/4 inch sieve: 100 percent.
- ii. Material passing No. 4 inch sieve: ≥90 percent.
- iii. Sand: 15 60 percent passing No. 10 sieve.
- iv. Silt: 10 60 percent, 0.05 0.002 mm diameter.
- v. Clay: 5 35 percent, less than 0.002 mm diameter.
- vi. pH: 6.1 7.5.
- vii. Organic matter 3 to 15 percent of dry weight as determined in accordance with ASTM D2974.

Failed Test

Failing tests shall be cleared by one of the following methods:

- a. Retest Retest if there is any doubt that the first test was not adequate.
- b. Rework Re-inspect and retest.
- c. Failed Material Remove, replace, re-inspect, and retest.

Testing Procedure

- a. Verify that testing procedures comply with contract requirements.
- b. Verify that facilities and testing equipment are available and comply with testing standards.
- c. Check test instrument calibration data against certified standards.
- d. Verify that recording forms and the test identification control number system, including all of the test documentation requirements, have been prepared.
- e. Results of all tests taken, both passing and failing, shall be recorded on the CQC report for the date taken. Specification paragraph reference, location where tests were taken, and the sequential control number identifying the test shall be given. If approved by the Project Manager, actual test reports may be submitted later with a reference to the test number and date taken. Failure to submit timely test reports as stated may result in nonpayment for related work performed and disapproval of the test facility for this contract. The QC team will compile the test results and provide the USACE Representative with a copy "For Information Only".

Submittal Approval

Governmental approval is required for extensions of design, critical materials, deviations, equipment whose compatibility with the entire system must be checked, and other items as designated by the Contracting Officer. Within the terms of the Contract Clause entitled "Specifications and Drawings for Construction," they are considered to be "shop drawings".

All submittals not requiring Government approval will be for information only. They are not considered to be "shop drawings" within the terms of the Contract Clause referred to above. These submittals shall be filed and maintained in the Contractor's field office subject to Government spot check.

Submittals Transmittal Forms

The sample transmittal form (ENG Form 4025-R), attached to this section, shall be used for submitting Government approved submittals in accordance with the instructions on the reverse side of the form. This form should also be used to document the Contractor Quality Control review and approval of, For Information Only submittals prior to filing and maintaining them in the field office. These forms will be furnished to the Contractor. This form shall be properly completed by filling out all the heading blank spaces and identifying each item submitted. Special care shall be exercised to ensure proper listing of the specification paragraph and/or sheet number of the contract drawings pertinent to the data submitted for each item. The ENG Form 4025-R may be prepared by use of the Resident Management System (RMS) QC module.

Identifying Submittals

When submittals are provided by a Subcontractor, the Prime Contractor is to prepare, review, and stamp with Contractor's approval all specified submittals prior to submission to the government for approval. Identify submittals, except sample installations and sample panels, identically with the following information permanently adhered to or noted on each separate component of each submittal and noted on transmittal form:

- a. Project title and location.
- b. Construction contract number.
- c. Date of the drawings and revisions.
- d. Name, address, and telephone number of subcontractor, supplier, manufacturer and any other subcontractor associated with the submittal.
- e. Section number of the specification section by which submittal is required.
- f. Submittal description (SD) number of each component of submittal.
- g. With a resubmission, add alphabetic suffix onto submittal description, for example, submittal 18 would become 18.1, to indicate resubmission.
- h. Product identification and location in project.

Submittal Format

The format for submittals shall be in accordance with Section 01 33 00 SUBMITTAL PROCEDURES

Submittal Descriptions

SD-01 Preconstruction Submittals

Submittals which are required prior to start of construction (work) or the start of the next major phase of the construction on a multi-phase contract. For example, schedules, work plans, lists of data, or lists including location, features, or other pertinent information regarding products, materials, equipment, or components to be used in the work are considered preconstruction submittals.

SD-03 Product Data

Catalog cuts, illustrations, schedules, diagrams, performance charts, instructions, and brochures illustrating size, physical appearance, and other characteristics of materials, systems, or equipment for some portion of the work.

SD-04 Samples

Fabricated or unfabricated physical examples of materials, equipment, or workmanship that illustrate functional and aesthetic characteristics of a material or product; color samples from the manufacturer's standard line (or custom color samples if specified) to be used in selecting or approving colors for the project.

SD-05 Design Data

Design calculations, mix designs, analyses, or other data pertaining to a part of work.

SD-06 Test Reports

A report signed by an authorized official of the testing laboratory that a material, product, or system identical to the material, product, or system to be provided has been tested in accordance with specified requirements; report which includes findings of a test required to be performed by the Contractor on an actual portion of the work or prototype prepared for the project before shipment to job site; and report which includes findings of a test made at the job site or on a sample taken from the job site, on portion of work during or after installation, including investigation reports, daily logs and checklists, final acceptance test, and operation test procedures reports.

SD-07 Certificates

Statements printed on the manufacturer's letterhead and signed by responsible officials of manufacturer of product, system or material attesting that product, system or material meets specification requirements; document required of Contractor, or of a manufacturer, supplier, installer or subcontractor through Contractor, the purpose of which is to further quality of orderly progression of a portion of the work by documenting procedures, acceptability of methods, or personnel qualifications.

Disapproved /Rejected Submittals

Contractor shall make corrections required by the Government. If the Contractor considers any correction or notation on the returned submittals to constitute a change to the contract drawings or specifications, notice as required under the clause entitled "Changes", is to be given to the CQCSM for review. Contractor is responsible for the dimensions and design of connection details and construction of work.

If changes are necessary to submittals, the Contractor shall make such revisions and submission of the submittals in accordance with the procedures above. No item of work requiring a submittal change is to be accomplished until the changed submittals are approved.

Approved/Accepted Submittals

The Contracting Officer's approval or acceptance of submittals is not to be construed as a complete check, and indicates only that the general method of construction, materials, detailing, and other information are satisfactory.

Approval or acceptance will not relieve the Contractor of the responsibility for any error which may exist, as the Contractor, under the Contractor Quality Control (CQC) requirements of this contract, is responsible for dimensions, the design of adequate connections and details, and the satisfactory construction of all work design, dimensions, all design extensions, such as the design of adequate connections and details, etc., and the satisfactory construction of all work.

After submittals have been approved or accepted by the Contracting Officer, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

Approved Samples

Approval of a sample is only for the characteristics or use named in such approval and is not to be construed to change or modify any contract requirements. Before submitting samples, the Contractor must assure that the materials or equipment will be available in quantities required in the project. No change or substitution will be permitted after a sample has been approved.

Match the approved samples for materials and equipment incorporated in the work. If requested, approved samples, including those which may be damaged in testing, will be returned to the Contractor, at his expense, upon completion of the contract. Samples not approved will also be returned to the Contractor, at its expense, if so requested.

Failure of any materials to pass the specified tests will be sufficient cause for refusal to consider, under this contract, any further samples of the same brand or make of that material.

Approval of the Contractor's samples by the Contracting Officer does not relieve the Contractor of his responsibilities under the contract.

Stamps

Stamps used by the Contractor on the submittal data to certify that the submittal meets contract requirements are to be similar to the following:

| ☐ NO EXCEPTION TAKEN, APPROVED ☐ APPROVED AS NOTED |
|--|
| ☐ REVISE & RESUBMIT ☐ FOR INFORMATION, NOT SUBJECT FOR REVIEW |
| SUBMITTAL WAS REVIEWED FOR DESIGN CONFORMITY AND GENERAL CONFORMANCE TO CONTRACT DOCUMENTS ONLY. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING DIMENSIONS AT JOBSITE FOR TOLERANCE, CLEARANCE, QUANTITIES, FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION COORDINATION OF HIS WORK WITH OTHER TRADES AND FULL COMPLIANCE WITH CONTRACT DOCUMENTS. |
| By: Date: |

Tracking Deficiencies

Non-Conforming Items

- Non-conforming items are those conditions which deviate from the requirements delineated in the specifications, prints, and/or shop drawings. The CQCSM shall be responsible for the control and documentation of non-conforming items.
- 2. The CQCSM shall prevent non-conforming items from being installed.
- 3. Minor non-conforming items, which are corrected in the same day, shall be documented in the daily QC report.
- 4. All other non-conformances shall be documented on a Non-Conformance Report (NCR) prepared by the CQCSM and will include the following information, as appropriate:
 - a. Description of the non-conformance including relevant details of the occurrence.
 - b. Identification of material, component, or system by part number, blueprint, shop drawing and/or specification number, and intended installation location.
 - c. Source of material or item (name of supplier, owner, or subcontractor).
 - d. Current status of item in shop, warehouse, lay-down yard or structure.
 - e. Individual and organization which detected the non-conformance.
 - f. Recommendation for corrective action: including sketches, test data, and/or repair procedures necessary to substantiate the recommendation.
 - g. Cause of the non-conformance and steps taken to prevent reoccurrence indicating action taken, positions or titles of persons contacted, letters written, and/or procedural changes proposed.
- 5. The CQCSM and/or designee shall sign and forward the NCR to USACE, the Project Manager, and appropriate Contractor.
- 6. Each NCR shall be entered into the Non-Conformance Report Log. The NCR (original) shall be filed and copies distributed accordingly.
- 7. Action to be taken shall be entered into the NCR Log. The CQCSM, or designated representative, shall initiate the disposition necessary to clear the item.
- 8. Verification of "Corrective Action" (e.g., completion of repairs) shall be by quality control personnel after the work in question has been re-inspected and/or retested. Entries shall be made in the NCR Log indicating the Final Disposition of the NCR.

Punch-Out Inspection

A CQC report should contain a Punch List (deficiencies) throughout the life of the project and demonstrate that the CQC personnel are overseeing correction of any deficiencies in a timely manner. CQC personnel will not wait until the project is finished to develop a Punch List. The Punch List shall be submitted to the Project Manager for corrective action. Corrections shall be accomplished within the time stated. The CQC personnel shall perform Follow-Up Inspections and submittals to ensure the deficiencies have been corrected.

Pre-Final Inspection

After the completion of the Punch-Out Inspection, the CQCSM, Project Manager, Contractor, and USACE Representative shall perform a Pre-Final Inspection and develop a Punch List of noted deficiencies. The Punch List shall be formally documented along with the estimated date by which the deficiencies shall be corrected. The CQC personnel shall perform Follow-Up Inspections to ensure that all deficiencies have been corrected.

Final Inspection

Upon completion of the items listed in the Pre-Final Inspection Punch List, the Project Manager shall notify the USACE Representative 14 days prior to the Final Inspection (or as agreed to) with the assurance that all items listed in the Pre-Final Inspection and all other remaining work has been completed and shall be acceptable by the date of the Final Inspection.

Major Definable Features of Work

A definable feature of work (DFOW) is defined as an activity or task separate and distinct from other activities that requires separate control activities. The DFOW establishes the control measures required to verify both the quality of work performed and compliance with specified requirements, which include inspecting materials and workmanship before, during, and after each DFOW. Preparatory and Initial inspections will be performed on all DFOWs, with the exception of mobilization, site cleanup, and final inspection (demobilization).

- 1. Mobilization of Contractor personnel, equipment, Subcontractors, and materials to the project; and site preparation, including preparation of storage and staging area(s).
- 2. Development of property specific plans.
- 3. Utility locates, erosion controls, temporary fencing at residential properties and alleys.
- 4. Debris Removal from within designated yard areas, easements, and alleys.
- 5. Excavation and loading of contaminated soil from within designated yard areas, easements, and alleys.
- 6. Transportation of contaminated soil from the residential properties and alleys to the Facility Area.
- 7. Backfill of excavated area with general backfill, topsoil, select topsoil and gravel, and associated sampling of imported material.
- 8. Restoration of excavated surfaces and Work areas. Tree, shrub, and perennial replacement with species similar to those removed. Maintenance for 6 weeks.
- 9. Soil stockpile stabilization at the Facility Area.
- 10. Demobilization

APPENDIX A – RESUMES





Rob Dismang - Remedial Project Manager (RCRA/CERCLA/Superfund) (ARDL)

Why Selected for ARDL Team:

- ✓ More than 30 years of management experience providing solutions to environmental problems
- ✓ Managed HTRW remediation and sampling projects for the past 25 years for federal, state and commercial clients
- ✓ Planned and budgeted the excavation, transportation and disposal of thousands of tons of HTRW contaminated materials to approved waste facilities
- Managed multiple contractors simultaneously working on large projects

- ✓ Extensive experience performing RCRA/CERCLA remediation projects, environmental site investigations, data quality evaluations, and site assessments.
- ✓ More than 20 years managing Federal Agency contracts of similar size and complexity
- Managed large chemical/biological applied research and development projects for U. S. Government clients (Classified)
- ✓ Subject matter expert in analytical methodologies - USEPA CLP, DOD QSM, SW-846, EPA-500 & -600 Series

| a. Education: | BA, Biology, (Minors-Chemistry, Microbiology) Southern Illinois University, Carbondale, IL 1982 | |
|----------------------------|---|--------------------------|
| Special Qualifications: | Over 30 years of project management experience Managed many state and federally funded projects within budget and on-time Experienced leading diverse subcontractor teams Extensive experience working with Federal, State and local Project Managers and Regulators | |
| Professional | American Chemical Society | |
| Affiliations: | Society of American Military Engineers (SAME) | |
| Years Experience: | 35 | Location: Mt. Vernon, IL |

b. Experience:

In his role as Vice President – Environmental Services at ARDL, Mr. Dismang has managed contracts totaling over \$30 million, encompassing over 200 individual Task Orders. Mr. Dismang has 30 years of management experience providing environmental engineering, including aquatic toxicology, water resource management, wetland delineations, drainage determinations, levee maintenance, environmental construction, sample collection, and environmental laboratory procedures. Mr. Dismang has prepared USACE sampling and analysis plans, site safety and health plans, activity hazard and analysis plans, and industrial hygiene reports. He has extensive experience providing laboratory data review and QA/QC procedures review for such clients as USEPA, Illinois EPA, Indiana Department of Environmental Management, Rocky Mountain Arsenal (Army), Air Force, USACE, and many private firms.

(1) Bachelors level degree (or higher) in environmental sciences (chemistry, biology, etc): Meets Requirement

Mr. Dismang has a Bachelors degree in Biology with minors in Chemistry and Microbiology.





(2) > 10 years site investigation and remediation experience, including EPA Superfund Site_Remediation project experience: Exceeds Requirement

Mr. Dismang has performed many site investigations over the past 23 years, some of which required remediation. Several investigations were designated as Superfund, CERCLA and/or RCRA designated sites including: 1) the Doe Run Lead Smelter in Herculaneum, MO.; 2) Wisconsin Steel in Chicago, IL.; 3) Area 1, including Segments A-F of Dead Creek and adjacent sites G, H, I, L, M, and N; and Area 2, made up of sites Q, R, S, and P (landfills) and site O (backfilled lagoons), all in Sauget, IL; 4) NL Industries/Taracorp Lead Smelter Superfund site involving remediation of soil at Eagle Park Acres in Madison County IL; 5) Big River Newberry Riffle, capture and remove contaminated channel sediments within a 40-acre site adjacent to the Big River located near the confluence of the Flat River, downstream from multiple lead contaminated superfund sites in St. Francois County, MO; 6) Byrnes Mill, MO, remediate the lower portion of the Byrnes Mill City Park (adjacent to the Big River) of contaminated lead sediments, backfill with 12 inches of clean fill, verify the area was free of lead contamination; and 7) Eagle Zinc Superfund Site, Hillsboro, IL, an on-going project, perform sampling and in-situ testing of lead contaminated soils in residential yards, a floodplain area, and on-site to determine if lead concentrations would require the excavation and relocation of soils/residue to an on-site containment cell or approved landfill.

(3) Must have recent (< 3 years) experience with CERCLA/RCRA site investigations and remediation: Meets Requirement

Mr. Dismang was the project manager for the Big River Newberry Riffle remediation project, designed to capture and remove contaminated channel sediments within a 40-acre site adjacent to the Big River located near the confluence of the Flat River, downstream from multiple lead contaminated superfund sites in St. Francois County, MO in 2015. The project involved the review of all submittals, density tests, and blueprints for the excavation of river sediments; installation of an in-stream Newberry Riffle, behind which sediments accumulate for removal; and construction of a system of berms and pipes to capture high flows from the Big River, retain them off-channel to allow sediment fallout, capture, and discharge the flows back to the river. Mr. Dismang was the project manager for the Byrnes Mill City Park Pilot Project on the Big River in 2016. The project involved excavating the top 12 inches of soil, removing the lead contaminated soil to an approved landfill, backfilling with clean topsoil, building a parking lot and boat ramp, and landscaping the park floor to drain toward the river. In an on-going Superfund remediation project beginning in 2017, Mr. Dismang is the project manager for the Eagle Zinc Superfund Site requiring soil sampling, in-situ soil testing, excavation backfilling, and transportation of contaminated soil to an approved landfill and/or an on-site containment cell.

(4) Must have strong proven technical report writing skills: Exceeds Requirement

Mr. Dismang has authored multiple Sampling and Analysis Plans, Site Safety and Health Plans, Work Plans, Phase I and II Assessment Reports and Final Project Reports, many for USACE. Other notable reports written by Mr. Dismang for USACE include updating the Water Quality Assessment Section of the Morganza to the Gulf of Mexico Feasibility Study, Volume 2, Engineering Investigations.

(5) Must have the following OSHA certifications: 40- hour HAZWOPER, 8- hour HAZWOPER Supervisor and 30- hour Construction: Meets Requirement

Mr. Dismang maintains all the certifications listed below.

(6) Must demonstrate an understanding of and experience with USACE, USEPA, and state regulations that relate to site investigation and remediation such as clean up levels; classifying and managing the transportation and disposal of waste; and negotiations with various agencies: Exceeds Requirement

Mr. Dismang has spent most of his 35-year career working with USACE, USEPA, and state regulators. As Vice President of Environmental Services at ARDL, Mr. Dismang has mediated negotiations between





USACE, USEPA, IEPA, and county officials regarding soil clean up levels, classifying waste soils as either hazardous or non-hazardous and arranging the disposal (transportation) of those soils to the appropriate disposal facilities based on the contaminants and contaminant concentrations found. The Eagle Park Remediation project mentioned above is an example of a remediation project performed by ARDL and administered by USACE, USEPA, IEPA and Madison county officials requiring negotiations between agencies, agreement on clean up levels and transportation destinations. As project manager of The Big River Newberry Riffle project, Mr. Dismang coordinated discussions between the USEPA, USACE, Big River Task Force (BRTF), U.S. Fish and Wildlife Service, the Missouri Department of Natural Resources, and the Missouri Department of Conservation to coordinate and streamline project goals cost effectively. The Byrnes Mill City Park Pilot Project was another superfund remediation project funded by the USEPA and managed by the USACE in which Mr. Dismang was the project manager. Park soils were in-situ and laboratory tested to determine if lead concentrations exceeded cleanup levels established by the USEPA. All contaminated soils were transported to an approved landfill. The lower park area was lined with orange geotextile fabric, backfilled with clean topsoil, leveled, and sodded.

Relevant Project Experience

- Currently the overall program manager at Eagle Zinc Superfund site in Hillsboro, IL. This is an on-going project at an abandoned zinc smelter on approximately 132 acres.(2017)
- Program manager for the Byrnes Mill City Park Pilot project. Tasks included soil sampling, in-situ testing with XRF, excavation of lead contaminated soils, replacement with clean soils, construction of a parking lot and boat ramp, and transporting lead contaminated soils to an approved landfill. THIS PROJECT WON A 2016 CHIEF OF ENGINEERS AWARD OF EXCELLENCE HONOR AWARD.(2016)
- Program manager for a multidisciplinary team to excavate river sediments, build a Newberry Riffle, and construct a pipe and berm system to trap lead contaminated sediments in the Big River in St. Francois County, MO. THE FEDERAL EXECUTIVE BOARD GRANTED THIS PROJECT AN AMERICA AT ITS BEST EXCELLENCE IN GOVERNMENT AWARD PRESENTED TO BIG RIVER RIFFLE PDT, U.S. ARMY CORPS OF ENGINEERS, (2015).
- Program manager for a team to remediate an 84 acre, low-income subdivision, contaminated with soils from a lead smelter (Superfund site) under the direction of USACE, USEPA, and IEPA. The project required excavation, transport, and disposal of over 2600 tons of lead contaminated soils from residential properties at multiple excavation sites. (8/2012)
- Managed a group of report writers to update the Water Quality Assessment section of the Morganza to the Gulf of Mexico Feasibility Study, Volume 2, Engineering Investigations. (1/2011)
- Supervised the installation of monitoring wells for sample collection to delineate an underground organic plume as part of a Phase II evaluation for USACE at Hartford, IL. The monitoring wells were drilled, installed, developed, sampled, and abandoned the same day. (2011)
- Managed the Phase II sampling and remediation of HTRW mixed materials from a gravel pit to be used as a dredge depository near the Mississippi River in Wabasha, MN. (2011)
- > Supervised the demolition and disposal of 5 USACE communication towers contaminated with HTRW lead-based paint along the Mississippi River. (2010)
- Managed a team to install, develop, and analyze 9 well clusters (3 wells per cluster) at depths of 20, 50, and 100 foot in accordance to EM 1110-1-4000 and Technical Standard for Water-Table of Potential Wetland Site, Wetlands Regulatory Assistance Program, ERDC TN-WRAP-05-2 June 2005 and EM 385-1-1 Safety and Health Requirements Manual. (2010)
- Performed HTRW Pre-Assessment Screen, Phase II ESA Design Deficiency Corrections for the East St. Louis, Illinois Flood Protection Project. (2010)
- Directed a team performing Phase I and Phase II environmental assessments of potential borrow areas for levee construction adjacent to Devils Lake in Devils Lake, North Dakota. (2010)
- Managed the removal and disposal of an abandoned, asbestos covered, 1600' long pipeline discovered in a sand depository along the Chain-of-Rocks Canal. (2009)





- Managed the asbestos abatement of the air delivery systems at Jefferson Barracks Hospital VA center. Included the design and implementation of a pilot project to simulate the entire building ventilation systems. (2009)
- Performed asbestos inspections and abatement of 20 condemned cabins on USACE properties along the Illinois and Mississippi Rivers in Illinois and Missouri. (2009)
- Conducted an Initial Assessment in association with the ongoing East St. Louis Ecosystem Restoration and Flood Damage Reduction Project efforts in the Elm Slough action area. (2008)
- Performed an Initial Assessment for Bois Brule Levee and Drainage District Deficiency Correction Project and provided HTRW Initial Assessment Documentation. (2008)
- ➤ Developed the ARDL Well Cleanout Procedure. ARDL was required to analyze well barrel sediments, perform prototype cleanout procedure, and sample after cleanout procedure on several relief wells along the Chain-of-Rocks Canal and submitted a final report. (2005)
- Conducted a Phase 1 Environmental Assessment on lands associated with a joint design/construction ecosystem enhancement project located at Shelbyville Lake. (2002)
- Performed a Phase II Environmental Assessment of the Deer Creek project area to determine the impact of suspected environmental conditions on the proposed rehabilitation of Deer Creek. (2002)

Professional Development

- OSHA General Site Worker (40-Hour) HAZWOPER
- OSHA 8 Hour HAZWOPER Supervisor Training.
- OSHA Permit Required Confined Space Training-General and Site Specific.
- > OSHA Construction 30 Hour Training.
- > Water Well & Pump Performance Attendee, American Ground Water Trust.
- PEC Safety Certified.
- U.S. Army Corps of Engineers- Construction Quality Management for Contractors #784
- > First Aid/CPR Certified ARC





Construction Quality Control Manager- Mitchell S. Jenkins (ARDL)

Qualifications

- More than 10 years of management Extensive experience performing experience providing solutions to environmental, construction, quality control, and health and safety problems
- Managed projects excavating, transporting, and disposing of thousands of tons of HTRW contaminated materials and then restoring the properties
- More than 6 years managing Federal Agency contracts of similar size and complexity

- RCRA/CERCLA remediation projects, environmental site investigations, data quality evaluations, and site assessments.
- Managed multiple contractors simultaneously working on large projects
- Provided Project management for environmental site investigations, construction, and remediation projects throughout the Midwest

| Education: | BS, Marketing | |
|----------------------|--|--|
| | Mississippi State University, Starkville, MS | |
| Special | Competent Person for Heavy Equipment onsite inspections | |
| Qualifications: | Construction Quality Management for Contractors - #784 Certificate MVM0011400107 | |
| | Completed QCS/RMS training for USACE projects | |
| | OSHA 30 Hour Construction Safety (OSHA30) | |
| | OSHA HAZWOPER (40 Hour), | |
| | OSHA HAZWOPER Supervisor (8 Hour) | |
| | OSHA HAZWOPER 8 HOUR Refresher (Annual) | |
| | OSHA Permit Required Confined Space Training (General and Site Specific) | |
| | First Aid/CPR Certified – ARC | |
| | USACE RMS/QCS (Quality Control System) Training | |
| | Conoco Phillips Safety | |
| | UTV Safety Training | |
| | eRailSafe 7494 | |
| Professional | Society of American Military Engineers (SAME) | |
| Affiliations: | National Safety Council American Society of Safety Engineers | |
| Years Experience: | 10 Location: Troy, IL | |





Technical Experience

- 10 years of project management experience providing both prime contract and subcontract team management for remediation, construction, and field testing projects
- Development and Implementation of ARDL Environmental Health and Safety Plan, Environmental Protection Plan, Accident Prevention Plan, and Air Monitoring Plans.
- Preparation and implementation of ARDL Quality Management plan and Construction Quality Control documents.
- 10 years experience working with both construction and environmental representatives of various agencies managing long term projects.

Contract Relevant Experience

- Project Manager at Eagle Zinc Site for Environmental Services/Safety for the past 3
 years. Work has involved; Geoprobe sampling of off-site properties, remediation,
 and restoration of contaminated properties; excavation
- On-Site Project Manager for Big River Lead Remediation Structures project
 consisting of construction of a low water dam, installation of culverts, berm and
 swale construction, road construction, aggregate road resurfacing, asphalt road
 resurfacing, clearing, grading, and incidental related work. The work was a lead
 remediation project and the work site was contaminated with lead sediments. The
 project, as completed, works as a trap for lead sediments in the river.
- Program Manager for the environmental cleaning of over 300 wood stave relief
 wells along the eastern banks of the Mississippi River. Managed four union crews
 and equipment for two years in completion of this project. Project Manager of
 capacity pump testing crews that completed this portion of the same project.
- Asst. Project Manager for removal and disposal of off-site potentially contaminated soils and debris and restoration of Byrnes Mill Park, Byrnes Mill, MO. ARDL was the recipient of the 2016 National Honor Award from the USACE Chief of Engineers.
- Asst. Project Manager for remediation of an 84 acre, low-income subdivision, contaminated with soils from a lead smelter (Superfund site) under the direction of the USACE, USEPA, and IEPA. The project required excavation, transporting, and disposal of more than 2000 cy of lead contaminated soils from residential properties at multiple excavation sites.
- Program Manager of ARDL cable construction subsidiary for two years. This work involved managing crews involved in trenching and conduit installations as well as borings of roadways up to 120 feet. He was responsible for managing, scheduling, and supervising all crews, interfacing with customers, and performing QC on all installs.





Professional Development

- GIS Training, Kaskaskia College, Centralia IL
- OSHA Certified Specialist in Safety and Health Construction Industry
- OSHA Certified Specialist in Safety and Health General Industry
- Certified Trainer in OSHA Standards for the Construction Industry OSHA 500 (OSHA 30-hour)
- Certified in Standards for General Industry OSHA 511
- Certified in Standards for Construction Industry OSHA 510
- Certified in Guide to Industrial Hygiene OSHA 521
- Certified in Hazardous Material Regulations OSHA 2015





Construction Quality Control Systems Manager- Ann Jacobs (ARDL)

Qualifications

- 15+ years in assessment, remediation, and release of radiological & hazardous waste sites
- Provided Construction Quality Control management for environmental site investigations, remediation projects and site assessments nationwide
- Extensive background in preparing reports and presentations including daily briefings that successfully communicate remediation goals, needs, status, and/or progress
- Diligently record test data and interpret results through reports, summaries, and charts

- Dually orientated in quality control and client satisfaction
- Effective at communicating and building rapport with all levels of management, staff, and clientele
- Skilled at providing scientific and technical guidance, support, coordination, and oversight to governmental agencies and environmental programs
- Successfully maintain critical files including but not limited to: hazardous waste database, chemical usage data, personnel exposure information, and diagrams showing equipment locations

| Education: | Masters Certificate; Project Management, Villanova, University BS Plant & Soil Science, Southern Illinois University, Carbondale, IL | |
|-------------------------------|---|------------------------|
| Special Qualifications: | Over 15 years of project management experience Completed QCS/RMS training for USACE projects OSHA 30 Hour Construction Safety (OSHA30) OSHA HAZWOPER (40 Hour) 8-hour Hazardous Waste Refresher Training OSHA HAZWOPER Supervisor (8 Hour) OSHA Permit Required Confined Space Training (General and Site Specific) Over 10 years onsite Quality Control experience on more than 10 projects Radiation Worker II Training Radiation Worker II Refresher Training CPR / Standard First Aid Training Extensive experience working with Federal, State and local Project Managers and Regulators | |
| Professional Affiliations: | Board of Certified Safety Professional – CHST American Society of Safety Engineers | |
| Years Experience: | 22 | Location: St. Louis MO |





Technical Experience

- Over 10 years of Contractor Quality Control management experience overseeing the
 quality of the project and ensuring all work meets the standards of contractual
 obligations. Preparing quality control reports on a daily basis, as well as tracking daily,
 weekly, and monthly metrics to ensure conformance to project plans, schedule, and
 costs. Performing inspections, identifying issues that affect quality, and bringing to
 resolution those issues.
- Successfully managing field crews, ensuring compliance with standard operating procedures, instrument quality control, and addressing technical questions from clients on a wide variety of environmental procedures and projects.
- Successfully executing a variety of environmental data gathering, management, and reporting including supervision and guidance to field crews and ensuring compliance with relevant plans and procedures
- Successfully conducted a wide variety of environment data gathering and reporting from soil, air, and water samplings to radiological surveys and GPS walkovers. Responsible for field instrument repairs, data downloads, and packaging samples for shipment.
- Trained and supervised Assistant Instructors, Interns, and students, taught skills for field/outdoor/wilderness courses including successfully maintaining morale, managing risk, and meeting curriculum requirements. Participated in crisis management and family mediation.

Contract Relevant Experience

Provided Quality Control Management of the following representative projects:

- Contractor Quality Control Systems Manager: Luckey Formerly Utilized Sites Remedial Action Program (FUSRAP) Project
- Contractor Quality Control Systems Manager: Eagle Zinc
- Contractor Quality Control Systems Manager/Site Manager: WR Grace
- Contractor Quality Control Systems Manager/Health and Safety: Floyd Bennett Field
- Contractor Quality Control Systems Manager: Frankfort Arsenal

Relevant Experience

- Lead Health Physics Technician: Linde
- ISOCS Operator: Shallow Area Landfill Disposal Area
- Site Manager: St. Louis Formerly Utilized Site Remedial Action Program (FUSRAP)
- Health Physics Technician: Middlesex Landfill
- Radiation Site Lead: Wayne Interim Storage Site (WISS)
- Radiation Site Lead: Safety Light
- Radiation Site Lead/Waste Supervisor: Lake City Army Ammunition Plant (LCAAP)





- Soil Scientist/GIS Specialist: Formerly Utilized Site Remedial Action Program (FUSRAP)
- Field Manager/Health Physics Technician: Iowa Army Ammunition Plant (IAAP)
- Site Analysis Team: Guardian Project Marine Corps Air Station (MCAS)
- Environmental Auditor: Verizon
- Health Physics Technician: Edwards Landfill
- Health Physics Technician: HARSHAW Formerly Chemical Works Sites
- Field Manager/Health Physics Tech/GIS Specialist: FUSRAP

Professional Development

- 40-hour OSHA: Hazardous Waste Training
- 30-hour OSHA: Construction Safety & Health
- 8-hour Hazardous Waste Refresher Training
- 8-hour OSHA: Supervisor Training
- Radiation Worker II Training
- Radiation Worker II Refresher Training CPR / Standard First Aid Training GIS/ARCView/ Pathfinder/Trimble GPS
- USACE CQCSM (Construction Quality Management) Training
- Board of Certified Safety Professionals Construction Health and Safety Technician (CHST)
- OSHA Construction 30 Hour Training
- OSHA General Site Worker (40-Hour) HAZWOPER
- OSHA 8 Hour HAZWOPER Supervisor Training.
- OSHA Permit Required Confined Space Training-General and Site Specific...
- First Aid/CPR Certified ARC
- USACE QCS (Quality Control System) Training





Construction Quality Control Systems Manager-Randall K. Jenkins (ARDL)

Qualifications

- More than 30 years of management experience providing solutions to environmental, construction and applied research and development problems
- Provided Construction Quality Control management for environmental site investigations, remediation projects and site assessments nationwide
- Planned and budgeted the excavation, transportation and disposal of thousands of tons of HTRW contaminated materials to approved waste receptacles

- Extensive experience performing RCRA/CERCLA remediation projects, environmental site investigations, data quality evaluations, and site assessments.
- More than 23 years managing Federal Agency contracts of similar size and complexity
- Managed multiple contractors simultaneously working on large projects
- Provided contract administration management for more 100 contracts, totaling over \$100 million dollars.

| Education: | BA, Business, (Production Management) Eastern Illinois University, Charleston, IL | |
|-------------------------------|---|--------------------------|
| Special Qualifications: | Over 30 years of project management experience Construction Quality Management for Contractors - #784 Certificate MVM011100020 Completed QCS/RMS training for USACE projects OSHA 30 Hour Construction Safety (OSHA30) OSHA HAZWOPER (40 Hour) OSHA Permit Required Confined Space Training (General and Site Specific) Competent Person for Heavy Equipment onsite inspections Over 12 years onsite Quality Control experience on more than 40 projects Extensive experience working with Federal, State and local Project Managers and Regulators | |
| Professional Affiliations: | Society of Military Engineers National Safety Council American Society of Safety Engineers National Contract Management Association | |
| Years Experience: | 37 | Location: Mt. Vernon, IL |





Technical Experience

- 39 years of management experience providing both prime contract and subcontract team management for environmental engineering, construction, and applied research and development projects
- Development and Implementation of ARDL Environmental Health and Safety Policies and Procedures document
- Preparation of Quality Control Management plans for construction and environmental projects
- Familiar with NEPA guidelines and environmental impact statement requirements

Relevant Experience

- Over 30 years of management experience providing environmental engineering including aquatic toxicology, water resource management, wetland delineations, drainage determinations, levee maintenance, environmental construction and environmental laboratory procedures. ARDL construction quality control manager for over 15 years.
- Prepared USACE/USEPA quality control management plans, sampling and analysis plans, site safety and health plans, activity hazard and analysis plans, and industrial hygiene reports.
- Have provided laboratory data review and QA/QC procedures review for such clients as USEPA, Illinois EPA, Indiana Department of Environmental Management, Rocky Mountain Arsenal (Army), Air Force USACE, and many private firms.
- Successfully planned, designed, and implemented pilot programs calculated to solve large complex issues within a limited budget and timeframe

Contract Relevant Experience

Provided Quality Control Management of the following representative projects:

- Big River Lead Remediation Structures consisting of construction of a low water dam, installation of culverts, berm and swale construction, road construction, aggregate road resurfacing, asphalt road resurfacing, clearing, grading, and incidental related work. The work was a lead remediation project and the work site was contaminated with lead sediments. The project, as completed, works as a trap for lead sediments in the river.
- Removal and disposal off-site of potentially contaminated soils and debris and restoration of Byrnes Mill Park with clean fill, sod, and reseeding. These actions will be in accordance with the 2012 Record of Decision (ROD), Historical Mining – Residential Soils, Operable Unit 1, Southwest Jefferson County Mining Site, Jefferson County, Missouri, as specified by the United States Environmental Protection Agency (USEPA).
- Remediation of an 84 acre, low-income subdivision, contaminated with soils from a lead smelter (Superfund site) under the direction of the USACE, USEPA, and IEPA. The project required excavation, transporting, and disposal of lead contaminated soils from residential properties at the multiple excavation sites.





- Demolition and removal of five (5) communication towers located in challenging environs. Involved the use of multiple rough terrain cranes as well as cutting (torch) operations in heavily forested areas.
- Remediation (excavation and disposal) of HTRW mixed materials from a gravel pit to be used as a dredge depository near the Mississippi River in Wabasha, MN
- Environmental cleaning and capacity pump testing of over 300 wood stave relief wells along the eastern banks of the Mississippi River.
- Removal and disposal of abandoned, asbestos covered, 1600' long pipeline discovered in a sand depository along the Chain-of-Rocks Canal.
- Asbestos abatement of the air delivery systems at Jefferson Barracks Hospital VA center. Included the design and implementation of a pilot project to simulate the entire building ventilation systems.
- Asbestos inspections and abatement of 20 condemned cabins on USACE properties along the Illinois and Mississippi Rivers in Illinois and Missouri.
- Developed the ARDL Well Cleanout Procedure. ARDL was required to analyze well barrel sediments, perform prototype cleanout procedure, and sample after cleanout procedure on several relief wells along the Chain-of-Rocks Canal.
- Phase 2 investigation by collection of sediment cores within the upstream and downstream area of the Auxiliary Lock at Lock and Dam 24. Samples were collected to a depth of core refusal or the base of the Auxiliary Lock within a pre-approved grid pattern.
- HTRW Phase II for Valley Park Levee Reach 3A and 3B consists of the collection of soil, sediment, and surface water samples from borings performed within the project right-of-way and a ponded area adjacent to the project right-of-way.
- Phase II site investigation at former Wisconsin Steel Works, a Superfund site for USACE. Duties included writing Quality Control Plan, Work Plan, and Site Safety & Health plan, installation of investigative borings and monitoring wells, and the collection of soil and water samples.
- HTRW Pre-Assessment Screen, Phase II ESA Design Deficiency Corrections for the East St. Louis, Illinois Flood Protection Project.
- Phase I and Phase II environmental assessments of potential borrow areas for levee construction adjacent to Devils Lake in Devils Lake, North Dakota.

Professional Development

- Construction Quality Management Training Course USACE (Memphis)
- OSHA Construction 30 Hour Training
- OSHA General Site Worker (40-Hour) HAZWOPER
- OSHA 8 Hour HAZWOPER Supervisor Training.
- OSHA Permit Required Confined Space Training-General and Site Specific...
- First Aid/CPR Certified ARC
- USACE QCS (Quality Control System) Training

APPENDIX B – LABORATORY CERTIFICATIONS



PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

Perry Johnson Laboratory Accreditation, Inc. has assessed the Laboratory of:

ARDL, Inc. 400 Aviation Drive, Mt. Vernon, IL 62864

(Hereinafter called the Organization) and hereby declares that Organization has met the requirements of ISO/IEC 17025:2005 "General Requirements for the competence of Testing and Calibration Laboratories" and the DoD Quality Systems Manual for Environmental Laboratories Version 5.1 January 2017 and is accredited is accordance with the:

United States Department of Defense Environmental Laboratory Accreditation Program (DoD-ELAP)

This accreditation demonstrates technical competence for the defined scope:

Environmental Testing

(As detailed in the supplement)

Accreditation claims for such testing and/or calibration services shall only be made from addresses referenced within this certificate. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation body's duty to observe and comply with the said rules.

For PJLA:

Initial Accreditation Date:

Issue Date:

Expiration Date:

January 5, 2015

July 6, 2017

July 31, 2019

Revision Date:

Accreditation No.:

Certificate No.:

February 6, 2019

84648

L17-279-R1

Tracy Szerszen President/Operations Manager

Perry Johnson Laboratory Accreditation, Inc. (PJLA) 755 W. Big Beaver, Suite 1325 Troy, Michigan 48084

The validity of this certificate is maintained through ongoing assessments based on a continuous accreditation cycle. The validity of this certificate should be confirmed through the PJLA website: www.pjlabs.com



ARDL, Inc.

400 Aviation Drive, Mt. Vernon, IL 62864 Contact Name: Dean Dickerson Phone: 618-244-3235

| Matrix | Standard/Method | Technology | Analyte |
|---------|-----------------|------------|-----------------------|
| Aqueous | EPA 200.7 | ICP | Aluminum |
| Aqueous | EPA 200.7 | ICP | Antimony |
| Aqueous | EPA 200.7 | ICP | Arsenic |
| Aqueous | EPA 200.7 | ICP | Barium |
| Aqueous | EPA 200.7 | ICP | Beryllium |
| Aqueous | EPA 200.7 | ICP | Boron |
| Aqueous | EPA 200.7 | ICP | Cadmium |
| Aqueous | EPA 200.7 | ICP | Calcium |
| Aqueous | EPA 200.7 | ICP | Chromium |
| Aqueous | EPA 200.7 | ICP | Cobalt |
| Aqueous | EPA 200.7 | ICP | Copper |
| Aqueous | EPA 200.7 | ICP | Iron |
| Aqueous | EPA 200.7 | ICP | Lead |
| Aqueous | EPA 200.7 | ICP | Magnesium |
| Aqueous | EPA 200.7 | ICP | Manganese |
| Aqueous | EPA 200.7 | ICP | Nickel |
| Aqueous | EPA 200.7 | ICP | Potassium |
| Aqueous | EPA 200.7 | ICP | Selenium |
| Aqueous | EPA 200.7 | ICP | Silver |
| Aqueous | EPA 200.7 | ICP | Sodium |
| Aqueous | EPA 200.7 | ICP | Thallium |
| Aqueous | EPA 200.7 | ICP | Vanadium |
| Aqueous | EPA 200.7 | ICP | Zinc |
| Aqueous | EPA 245.1 | CVAA | Mercury |
| Aqueous | EPA 300.0 | IC | Chloride |
| Aqueous | EPA 300.0 | IC | Fluoride |
| Aqueous | EPA 300.0 | IC | Nitrate (as N) |
| Aqueous | EPA 300.0 | IC | Orthophosphate (as P) |
| Aqueous | EPA 300.0 | IC | Sulfate |
| Aqueous | EPA 608 | GC/ECD | 4,4'-DDD |
| Aqueous | EPA 608 | GC/ECD | 4,4'-DDE |
| Aqueous | EPA 608 | GC/ECD | 4,4'-DDT |
| Aqueous | EPA 608 | GC/ECD | Aldrin |
| Aqueous | EPA 608 | GC/ECD | alpha-BHC |
| Aqueous | EPA 608 | GC/ECD | alpha-Chlordane |
| Aqueous | EPA 608 | GC/ECD | beta-BHC |



Certificate of Accreditation: Supplement ISO/IEC 17025:2005 and DoD-ELAP

ARDL, Inc.

400 Aviation Drive, Mt. Vernon, IL 62864 Contact Name: Dean Dickerson Phone: 618-244-3235

| Matrix | Standard/Method | Technology | Analyte |
|---------|-----------------|------------|------------------------------------|
| Aqueous | EPA 608 | GC/ECD | delta-BHC |
| Aqueous | EPA 608 | GC/ECD | Dieldrin |
| Aqueous | EPA 608 | GC/ECD | Endosulfan I |
| Aqueous | EPA 608 | GC/ECD | Endosulfan II |
| Aqueous | EPA 608 | GC/ECD | Endosulfan sulfate |
| Aqueous | EPA 608 | GC/ECD | Endrin |
| Aqueous | EPA 608 | GC/ECD | Endrin aldehyde |
| Aqueous | EPA 608 | GC/ECD | Endrin ketone |
| Aqueous | EPA 608 | GC/ECD | gamma-BHC (Lindane) |
| Aqueous | EPA 608 | GC/ECD | gamma-Chlordane |
| Aqueous | EPA 608 | GC/ECD | Heptachlor |
| Aqueous | EPA 608 | GC/ECD | Heptachlor epoxide (beta) |
| Aqueous | EPA 608 | GC/ECD | Methoxychlor |
| Aqueous | EPA 608 | GC/ECD | PCB-1016 (Aroclor) |
| Aqueous | EPA 608 | GC/ECD | PCB-1221 (Aroclor) |
| Aqueous | EPA 608 | GC/ECD | PCB-1232 (Aroclor) |
| Aqueous | EPA 608 | GC/ECD | PCB-1242 (Aroclor) |
| Aqueous | EPA 608 | GC/ECD | PCB-1248 (Aroclor) |
| Aqueous | EPA 608 | GC/ECD | PCB-1254 (Aroclor) |
| Aqueous | EPA 608 | GC/ECD | PCB-1260 (Aroclor) |
| Aqueous | EPA 624 | GC/MS | 1,1,1,2-Tetrachloroethane |
| Aqueous | EPA 624 | GC/MS | 1,1,1-Trichloroethane |
| Aqueous | EPA 624 | GC/MS | 1,1,2,2-Tetrachloroethane |
| Aqueous | EPA 624 | GC/MS | 1,1,2-Trichloroethane |
| Aqueous | EPA 624 | GC/MS | 1,1-Dichloroethane |
| Aqueous | EPA 624 | GC/MS | 1,1-Dichloroethene |
| Aqueous | EPA 624 | GC/MS | 1,1-Dichloropropene |
| Aqueous | EPA 624 | GC/MS | 1,2,3-Trichlorobenzene |
| Aqueous | EPA 624 | GC/MS | 1,2,3-Trichloropropane |
| Aqueous | EPA 624 | GC/MS | 1,2,4-Trichlorobenzene |
| Aqueous | EPA 624 | GC/MS | 1,2,4-Trimethylbenzene |
| Aqueous | EPA 624 | GC/MS | 1,2-Dibromo-3-chloropropane (DBCP) |
| Aqueous | EPA 624 | GC/MS | 1,2-Dibromoethane (EDB) |
| Aqueous | EPA 624 | GC/MS | 1,2-Dichlorobenzene |
| Aqueous | EPA 624 | GC/MS | 1,2-Dichloroethane |



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| Matrix | Standard/Method | Technology | Analyte |
|---------|-----------------|------------|-----------------------------|
| Aqueous | EPA 624 | GC/MS | 1,2-Dichloropropane |
| Aqueous | EPA 624 | GC/MS | 1,2-Xylene (o-Xylene) |
| Aqueous | EPA 624 | GC/MS | 1,3,5-Trimethylbenzene |
| Aqueous | EPA 624 | GC/MS | 1,3-Dichlorobenzene |
| Aqueous | EPA 624 | GC/MS | 1,3-Dichloropropane |
| Aqueous | EPA 624 | GC/MS | 1,4 - Isopropyltoluene |
| Aqueous | EPA 624 | GC/MS | 1,4-Dichlorobenzene |
| Aqueous | EPA 624 | GC/MS | m,p-Xylene |
| Aqueous | EPA 624 | GC/MS | 2,2-Dichloropropane |
| Aqueous | EPA 624 | GC/MS | 2-Butanone (MEK) |
| Aqueous | EPA 624 | GC/MS | 2-Chlorotoluene |
| Aqueous | EPA 624 | GC/MS | 2-Hexanone |
| Aqueous | EPA 624 | GC/MS | 4-Chlorotoluene |
| Aqueous | EPA 624 | GC/MS | 4-Methyl-2-pentanone (MIBK) |
| Aqueous | EPA 624 | GC/MS | Acetone |
| Aqueous | EPA 624 | GC/MS | Acrylonitrile |
| Aqueous | EPA 624 | GC/MS | Benzene |
| Aqueous | EPA 624 | GC/MS | Bromo methane |
| Aqueous | EPA 624 | GC/MS | Bromobenzene |
| Aqueous | EPA 624 | GC/MS | Bromochloromethane |
| Aqueous | EPA 624 | GC/MS | Bromodichloromethane |
| Aqueous | EPA 624 | GC/MS | Bromoform |
| Aqueous | EPA 624 | GC/MS | Carbon disulfide |
| Aqueous | EPA 624 | GC/MS | Carbon tetrachloride |
| Aqueous | EPA 624 | GC/MS | Chlorobenzene |
| Aqueous | EPA 624 | GC/MS | Chloroethane |
| Aqueous | EPA 624 | GC/MS | Chloroform |
| Aqueous | EPA 624 | GC/MS | Chloromethane |
| Aqueous | EPA 624 | GC/MS | cis-1,2-Dichloroethene |
| Aqueous | EPA 624 | GC/MS | cis-1,3-Dichloropropene |
| Aqueous | EPA 624 | GC/MS | Di chlorodifluoromethane |
| Aqueous | EPA 624 | GC/MS | Dibromochloromethane |
| Aqueous | EPA 624 | GC/MS | Dibromomethane |
| Aqueous | EPA 624 | GC/MS | Ethyl benzene |
| Aqueous | EPA 624 | GC/MS | Hexachlorobutadiene |



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| Matrix | Standard/Method | Technology | Analyte |
|---------|-----------------|------------|--------------------------------------|
| Aqueous | EPA 624 | GC/MS | Isopropylbenzene |
| Aqueous | EPA 624 | GC/MS | m,p-Xylene |
| Aqueous | EPA 624 | GC/MS | Methylene chloride (Dichloromethane) |
| Aqueous | EPA 624 | GC/MS | Methyl-tert-butyl ether (MTBE) |
| Aqueous | EPA 624 | GC/MS | Naphthalene |
| Aqueous | EPA 624 | GC/MS | n-Butylbenzene |
| Aqueous | EPA 624 | GC/MS | n-Propylbenzene |
| Aqueous | EPA 624 | GC/MS | Sec-Butylbenzene |
| Aqueous | EPA 624 | GC/MS | Styrene |
| Aqueous | EPA 624 | GC/MS | Tert-Butylbenzene |
| Aqueous | EPA 624 | GC/MS | Tetrachloroethene |
| Aqueous | EPA 624 | GC/MS | Toluene |
| Aqueous | EPA 624 | GC/MS | trans-1,2-Dichloroethene |
| Aqueous | EPA 624 | GC/MS | trans-1,3 Dichloropropene |
| Aqueous | EPA 624 | GC/MS | Trichloroethene |
| Aqueous | EPA 624 | GC/MS | Trichlorofluoromethane |
| Aqueous | EPA 624 | GC/MS | Vinyl chloride |
| Aqueous | EPA 624 | GC/MS | Xylenes, total |
| Aqueous | EPA 625 | GC/MS | 1,2,4,5-Tetrachlorobenzene |
| Aqueous | EPA 625 | GC/MS | 1,2,4-Trichloro benzene |
| Aqueous | EPA 625 | GC/MS | 1,2-Dichlorpbenzene |
| Aqueous | EPA 625 | GC/MS | 1,3-Dichlorobenzene |
| Aqueous | EPA 625 | GC/MS | 1,4-Dichlorobenzene |
| Aqueous | EPA 625 | GC/MS | 2,4,5-Trichlorophenol |
| Aqueous | EPA 625 | GC/MS | 2,4,6-Trichlorophenol |
| Aqueous | EPA 625 | GC/MS | 2,4-Dichlorophenol |
| Aqueous | EPA 625 | GC/MS | 2,4-Dimethylphenol |
| Aqueous | EPA 625 | GC/MS | 2,4-Dinitrophenol |
| Aqueous | EPA 625 | GC/MS | 2,4-Dinitrotoluene |
| Aqueous | EPA 625 | GC/MS | 2,6-Dinitrotoluene |
| Aqueous | EPA 625 | GC/MS | 2-Chloronaphthalene |
| Aqueous | EPA 625 | GC/MS | 2-Chlorophenol |
| Aqueous | EPA 625 | GC/MS | 2-Methyl-4,6-Dinitrophenol |
| Aqueous | EPA 625 | GC/MS | 2-Methylnaphthalene |
| Aqueous | EPA 625 | GC/MS | 2-Methylphenol (o-Cresol) |



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| Matrix | Standard/Method | Technology | Analyte |
|---------|-----------------|------------|-----------------------------|
| Aqueous | EPA 625 | GC/MS | 2-Nitroaniline |
| Aqueous | EPA 625 | GC/MS | 2-Nitrophenol |
| Aqueous | EPA 625 | GC/MS | 3,3'-Dichlorobenzidine |
| Aqueous | EPA 625 | GC/MS | 3-Nitroaniline |
| Aqueous | EPA 625 | GC/MS | 4-Bromophenyl-phenylether |
| Aqueous | EPA 625 | GC/MS | 4-Chloro-3-methylphenol |
| Aqueous | EPA 625 | GC/MS | 4-Chloroaniline |
| Aqueous | EPA 625 | GC/MS | 4-Chlorophenyl phenyl ether |
| Aqueous | EPA 625 | GC/MS | 4-Methylphenol (p-Cresol) |
| Aqueous | EPA 625 | GC/MS | 4-Nitroaniline |
| Aqueous | EPA 625 | GC/MS | 4-Nitrophenol |
| Aqueous | EPA 625 | GC/MS | Acenaphthene |
| Aqueous | EPA 625 | GC/MS | Acenaphthylene |
| Aqueous | EPA 625 | GC/MS | Anthracene |
| Aqueous | EPA 625 | GC/MS | Benzo(a)anthracene |
| Aqueous | EPA 625 | GC/MS | Benzo(a)pyrene |
| Aqueous | EPA 625 | GC/MS | Benzo(g,h,i)perylene |
| Aqueous | EPA 625 | GC/MS | Benzo(b)fluoranthene |
| Aqueous | EPA 625 | GC/MS | Benzo(k)fluoranthene |
| Aqueous | EPA 625 | GC/MS | Benzoic acid |
| Aqueous | EPA 625 | GC/MS | Benzyl Alcohol |
| Aqueous | EPA 625 | GC/MS | Bis(2-chloroethyl) ether |
| Aqueous | EPA 625 | GC/MS | Bis(2-chloroisopropyl)ether |
| Aqueous | EPA 625 | GC/MS | Bis(2-ethylhexyl)phthalate |
| Aqueous | EPA 625 | GC/MS | Bis(2-chloroethoxy)methane |
| Aqueous | EPA 625 | GC/MS | Butyl benzyl phthalate |
| Aqueous | EPA 625 | GC/MS | Carbazole |
| Aqueous | EPA 625 | GC/MS | Chrysene |
| Aqueous | EPA 625 | GC/MS | Dibenzo(a,h)anthracene |
| Aqueous | EPA 625 | GC/MS | Dibenzofuran |
| Aqueous | EPA 625 | GC/MS | Diethylphthalate |
| Aqueous | EPA 625 | GC/MS | Dimethylphthalate |
| Aqueous | EPA 625 | GC/MS | Di-n-butylphthalate |
| Aqueous | EPA 625 | GC/MS | Di-n-octylphthalate |
| Aqueous | EPA 625 | GC/MS | Fluoranthene |
| Aqueous | EPA 625 | GC/MS | Fluorene |



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| Matrix | Standard/Method | Technology | Analyte |
|---------------|-----------------|-------------------|---|
| Aqueous | EPA 625 | GC/MS | Hexachlorobenzene |
| Aqueous | EPA 625 | GC/MS | Hexachlorobutadiene |
| Aqueous | EPA 625 | GC/MS | Hexachlorocyclopentadiene |
| Aqueous | EPA 625 | GC/MS | Hexachloroethane |
| Aqueous | EPA 625 | GC/MS | Indeno(1,2,3-cd)pyrene |
| Aqueous | EPA 625 | GC/MS | Isophorone |
| Aqueous | EPA 625 | GC/MS | Naphthalene |
| Aqueous | EPA 625 | GC/MS | Nitrobenzene |
| Aqueous | EPA 625 | GC/MS | N-Nitrosodimethylamine |
| Aqueous | EPA 625 | GC/MS | N-Nitroso-di-n-propylamine |
| Aqueous | EPA 625 | GC/MS | N-Nitrosodiphenylamine |
| Aqueous | EPA 625 | GC/MS | Pentachlorophenol |
| Aqueous | EPA 625 | GC/MS | Phenanthrene |
| Aqueous | EPA 625 | GC/MS | Phenol |
| Aqueous | EPA 625 | GC/MS | Pyrene |
| Aqueous | EPA 625 | GC/MS | Pyridine |
| Solid | EPA 160.3 | General Chemistry | Percent Moisture |
| Solid | EPA 7471A | CVAAS | Mercury |
| Solid | EPA 8330/8330A | LC | 1,3,5-Trinitrobenzene |
| Solid | EPA 8330/8330A | LC | 1,3-Dinitrobenzene |
| Solid | EPA 8330/8330A | LC | 2,4,6-Trinitrotoluene |
| Solid | EPA 8330/8330A | LC | 2,4-Dinitrotoluene |
| Solid | EPA 8330/8330A | LC | 2,6-Dinitrotoluene |
| Solid | EPA 8330/8330A | LC | 2-Amino-4,6-Dinitrotoluene |
| Solid | EPA 8330/8330A | LC | 2-Nitrotoluene |
| Solid | EPA 8330/8330A | LC | 3-Nitrotoluene (3-NT) |
| Solid | EPA 8330/8330A | LC | 4-Amino-2,6-dinitrotoluene (4-Am-DNT) |
| Solid | EPA 8330/8330A | LC | 4-Nitrotoluene (4-DNT) |
| Solid | EPA 8330/8330A | LC | Hexahydro-1,3,5-trinitro-triazine (RDX) |
| Solid | EPA 8330/8330A | LC | Nitrobenzene |
| Solid | EPA 8330/8330A | LC | octahydro-tetranitro-tetrazocine (HMX) |
| Solid | EPA 8330/8330A | LC | Tetryl |
| Aqueous/Solid | EPA 6010B/6010C | ICP | Aluminum |
| Aqueous/Solid | EPA 6010B/6010C | ICP | Antimony |
| Aqueous/Solid | EPA 6010B/6010C | ICP | Arsenic |
| Aqueous/Solid | EPA 6010B/6010C | ICP | Barium |



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| Matrix | Standard/Method | Technology | Analyte |
|---------------|-----------------|------------|---------------------|
| Aqueous/Solid | EPA 6010B/6010C | ICP | Beryllium |
| Aqueous/Solid | EPA 6010B/6010C | ICP | Boron |
| Aqueous/Solid | EPA 6010B/6010C | ICP | Cadmium |
| Aqueous/Solid | EPA 6010B/6010C | ICP | Calcium |
| Aqueous/Solid | EPA 6010B/6010C | ICP | Chromium |
| Aqueous/Solid | EPA 6010B/6010C | ICP | Cobalt |
| Aqueous/Solid | EPA 6010B/6010C | ICP | Copper |
| Aqueous/Solid | EPA 6010B/6010C | ICP | Iron |
| Aqueous/Solid | EPA 6010B/6010C | ICP | Lead |
| Aqueous/Solid | EPA 6010B/6010C | ICP | Magnesium |
| Aqueous/Solid | EPA 6010B/6010C | ICP | Manganese |
| Aqueous/Solid | EPA 6010B/6010C | ICP | Nickel |
| Aqueous/Solid | EPA 6010B/6010C | ICP | Potassium |
| Aqueous/Solid | EPA 6010B/6010C | ICP | Selenium |
| Aqueous/Solid | EPA 6010B/6010C | ICP | Silver |
| Aqueous/Solid | EPA 6010B/6010C | ICP | Sodium |
| Aqueous/Solid | EPA 6010B/6010C | ICP | Thallium |
| Aqueous/Solid | EPA 6010B/6010C | ICP | Vanadium |
| Aqueous/Solid | EPA 6010B/6010C | ICP | Zinc |
| Aqueous/Solid | EPA 7470A | CVAAS | Mercury |
| Aqueous/Solid | EPA 8081B | GC/ECD | 4,4'-DDD |
| Aqueous/Solid | EPA 8081B | GC/ECD | 4,4'-DDE |
| Aqueous/Solid | EPA 8081B | GC/ECD | 4,4'-DDT |
| Aqueous/Solid | EPA 8081B | GC/ECD | Aldrin |
| Aqueous/Solid | EPA 8081B | GC/ECD | alpha-BHC |
| Aqueous/Solid | EPA 8081B | GC/ECD | alpha-Chlordane |
| Aqueous/Solid | EPA 8081B | GC/ECD | beta-BHC |
| Aqueous/Solid | EPA 8081B | GC/ECD | delta-BHC |
| Aqueous/Solid | EPA 8081B | GC/ECD | Dieldrin |
| Aqueous/Solid | EPA 8081B | GC/ECD | Endosulfan I |
| Aqueous/Solid | EPA 8081B | GC/ECD | Endosulfan II |
| Aqueous/Solid | EPA 8081B | GC/ECD | Endosulfan sulfate |
| Aqueous/Solid | EPA 8081B | GC/ECD | Endrin |
| Aqueous/Solid | EPA 8081B | GC/ECD | Endrin aldehyde |
| Aqueous/Solid | EPA 8081B | GC/ECD | Endrin ketone |
| Aqueous/Solid | EPA 8081B | GC/ECD | gamma-BHC (Lindane) |



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| Matrix | Standard/Method | Technology | Analyte |
|---------------|-----------------|------------|------------------------------------|
| Aqueous/Solid | EPA 8081B | GC/ECD | gamma-Chlordane |
| Aqueous/Solid | EPA 8081B | GC/ECD | Heptachlor |
| Aqueous/Solid | EPA 8081B | GC/ECD | Heptachlor epoxide (beta) |
| Aqueous/Solid | EPA 8081B | GC/ECD | Methoxychlor |
| Aqueous/Solid | EPA 8082 | GC/ECD | PCB-1016 (Aroclor) |
| Aqueous/Solid | EPA 8082 | GC/ECD | PCB-1221 (Aroclor) |
| Aqueous/Solid | EPA 8082 | GC/ECD | PCB-1232 (Aroclor) |
| Aqueous/Solid | EPA 8082 | GC/ECD | PCB-1242 (Aroclor) |
| Aqueous/Solid | EPA 8082 | GC/ECD | PCB-1248 (Aroclor) |
| Aqueous/Solid | EPA 8082 | GC/ECD | PCB-1254 (Aroclor) |
| Aqueous/Solid | EPA 8082 | GC/ECD | PCB-1260 (Aroclor) |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | 1,1,1,2-Tetrachloroethane |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | 1,1,1-Trichloroethane |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | 1,1,2,2-Tetrachloroethane |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | 1,1,2-Trichloroethane |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | 1,1-Dichloroethane |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | 1,1-Dichloroethene |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | 1,1-Dichloropropene |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | 1,2,3-Trichlorobenzene |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | 1,2,3-Trichloropropane |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | 1,2,4-Trichlorobenzene |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | 1,2,4-Trimethylbenzene |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | 1,2-Dibromo-3-chloropropane (DBCP) |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | 1,2-Dibromoethane (EDB) |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | 1,2-Dichlorobenzene |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | 1,2-Dichloroethane |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | 1,2-Dichloropropane |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | 1,2-Xylene (o-xylene) |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | 1,3,5-Trimethylbenzene |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | 1,3-Dichlorobenzene |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | 1,3-Dichloropropane |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | 1,4 Isopropyltoluene |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | 1,4-Dichlorobenzene |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | m,p-Xylene |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | 2,2-Dichloropropane |



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| Matrix | Standard/Method | Technology | Analyte |
|----------------|-----------------|------------|--------------------------------------|
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | 2-Butanone (MEK) |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | 2-Chlorotoluene |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | 2-Hexanone |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | 4-Chlorotoluene |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | 4-Methyl-2-pentanone (MIBK) |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | Acetone |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | Acrylonitrile |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | Benzene |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | Bromobenzene |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | Bromochloromethane |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | Bromodichloromethane |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | Bromoform |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | Bromomethane |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | Carbon disulfide |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | Carbon tetrachloride |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | Chlorobenzene |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | Chloroethane |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | Chloroform |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | Chloromethane |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | cis-1,2-Dichloroethene |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | cis-1,3-Dichloropropene |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | Di-chlorodifluoromethane |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | Dibromochloromethane |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | Dibromomethane |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | Ethyl-benzene |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | Hexachlorobutadiene |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | Isopropylbenzene |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | m,p-Xylene |
| Aqueous/Solids | EPA 8260B/8260C | GC/MS | Methylene chloride (Dichloromethane) |
| Aqueous/Solids | EPA 8260B/8260C | GC/MS | Methyl-tert-butyl ether (MTBE) |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | Naphthalene |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | n-Butylbenzene |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | n-Propylbenzene |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | Sec-Butylbenzene |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | Styrene |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | Tert-Butylbenzene |



Certificate of Accreditation: Supplement ISO/IEC 17025:2005 and DoD-ELAP

ARDL, Inc.

400 Aviation Drive, Mt. Vernon, IL 62864 Contact Name: Dean Dickerson Phone: 618-244-3235

| Matrix | Standard/Method | Technology | Analyte |
|---------------|----------------------|------------|----------------------------|
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | Tetrachloroethene |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | Toluene |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | trans-1,2-Dichloroethene |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | trans-1,3 Dichloropropene |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | Trichloroethene |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | Trichlorofluoromethane |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | Vinyl chloride |
| Aqueous/Solid | EPA 8260B/8260C | GC/MS | Xylenes, total |
| Aqueous/Solid | EPA 8270C/8270D -SIM | GC/MS | Acenaphthene |
| Aqueous/Solid | EPA 8270C/8270D -SIM | GC/MS | Acenaphthylene |
| Aqueous/Solid | EPA 8270C/8270D -SIM | GC/MS | Anthracene |
| Aqueous/Solid | EPA 8270C/8270D -SIM | GC/MS | Benzo(a)anthracene |
| Aqueous/Solid | EPA 8270C/8270D -SIM | GC/MS | Benzo(a)pyrene |
| Aqueous/Solid | EPA 8270C/8270D -SIM | GC/MS | Benzo(b)fluoranthene |
| Aqueous/Solid | EPA 8270C/8270D -SIM | GC/MS | Benzo(g,h,i)perylene |
| Aqueous/Solid | EPA 8270C/8270D -SIM | GC/MS | Benzo(k)fluoranthene |
| Aqueous/Solid | EPA 8270C/8270D -SIM | GC/MS | Chrysene |
| Aqueous/Solid | EPA 8270C/8270D -SIM | GC/MS | Dibenzo(a,h)anthracene |
| Aqueous/Solid | EPA 8270C/8270D -SIM | GC/MS | Fluoranthene |
| Aqueous/Solid | EPA 8270C/8270D -SIM | GC/MS | Fluorene |
| Aqueous/Solid | EPA 8270C/8270D -SIM | GC/MS | Indeno(1,2,3-cd)pyrene |
| Aqueous/Solid | EPA 8270C/8270D -SIM | GC/MS | 2-Methylnaphthalene |
| Aqueous/Solid | EPA 8270C/8270D -SIM | GC/MS | Naphthalene |
| Aqueous/Solid | EPA 8270C/8270D -SIM | GC/MS | Phenanthrene |
| Aqueous/Solid | EPA 8270C/8270D -SIM | GC/MS | Pyrene |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | 1,2,4,5-Tetrachlorobenzene |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | 1,2,4-Trichlorobenzene |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | 1,2-Dichlorobenzene |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | 1,3-Dichlorobenzene |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | 1,4-Dichlorobenzene |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | 2,4,5-Trichlorophenol |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | 2,4,6-Trichlorophenol |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | 2,4-Dichlorophenol |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | 2,4-Dimethylphenol |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | 2,4-Dinitrophenol |



ARDL, Inc.

400 Aviation Drive, Mt. Vernon, IL 62864 Contact Name: Dean Dickerson Phone: 618-244-3235

| Matrix | Standard/Method | Technology | Analyte |
|---------------|-----------------|------------|-----------------------------|
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | 2,4-Dinitrotoluene |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | 2,6-Dinitrotoluene |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | 2-Chloronaphthalene |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | 2-Chlorophenol |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | 2-Methyl-4,6-Dinitrophenol |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | 2-Methylnaphthalene |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | 2-Methylphenol (o-Cresol) |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | 2-Nitroaniline |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | 2-Nitrophenol |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | 3,3'-Dichlorobenzidine |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | 3-Nitroaniline |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | 4-Bromophenyl-phenylether |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | 4-Chloro-3-methylphenol |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | 4-Chloroaniline |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | 4-Chlorophenyl phenyl ether |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | 4-Methylphenol (p-Cresol) |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | 4-Nitroanaline |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | 4-Nitrophenol |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Acenaphthene |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Acenaphthylene |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Anthracene |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Benzo(a)anthracene |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Benzo(a)pyrene |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Benzo(b)fluoranthene |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Benzo(g,h,i)perylene |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Benzo(k)fluoranthene |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Benzoic acid |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Benzyl Alcohol |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Bis(2-chloroethyl)ether |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Bis(2-chloroisopropyl)ether |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Bis(2-ethylhexyl)phthalate |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Bis(2-chloroethoxy)methane |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Butyl benzyl phthalate |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Carbazole |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Chrysene |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Dibenzo(a,h)anthracene |



ARDL, Inc.

400 Aviation Drive, Mt. Vernon, IL 62864 Contact Name: Dean Dickerson Phone: 618-244-3235

| Matrix | Standard/Method | Technology | Analyte |
|---------------|-----------------|------------|----------------------------|
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Dibenzofuran |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Diethylphthalate |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Dimethylphthalate |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Di-n-butylphthalate |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Di-n-octylphthalate |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Fluoranthene |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Fluorene |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Hexachlorobenzene |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Hexachlorobutadiene |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Hexachlorocyclopentadiene |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Hexachloroethane |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Indeno(1,2,3-cd)pyrene |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Isophorone |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Naphthalene |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Nitrobenzene |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | N-Nitrosodimethylamine |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | N-Nitroso-di-n-propylamine |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | N-Nitrosodiphenylamine |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Pentachlorophenol |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Phenanthrene |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Phenol |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Pyrene |
| Aqueous/Solid | EPA 8270C/8270D | GC/MS | Pyridine |



ARDL, Inc.

400 Aviation Drive, Mt. Vernon, IL 62864 Contact Name: Dean Dickerson Phone: 618-244-3235

| Matrix | Standard/Method | Technology | Analyte |
|---------|----------------------------|----------------|------------------|
| Aqueous | EPA 3010A | Acid Digestion | EPA 6010B/6010C |
| Aqueous | EPA 3510C | Extraction | EPA 8270C/8270D |
| Aqueous | EPA 3510C | Extraction | EPA 8081B |
| Aqueous | EPA 3510C | Extraction | EPA 8082 |
| Aqueous | EPA 5030B | Purge/Trap | EPA 8260B/8260C |
| Solid | EPA 160.3 | Gravimetric | EPA 160.3 |
| Solid | EPA 1311 | TCLP | EPA 6010B/6010C |
| Solid | EPA 1311 | TCLP | EPA 8081B |
| Solid | EPA 1311 | TCLP | EPA 7470A |
| Solid | EPA 1311-Zero Headspace | TCLP | EPA 8260B/ 8260C |
| Solid | EPA 1311 | TCLP | EPA 8270C/8270D |
| Solid | EPA 3050B | Acid Digestion | EPA 6010B/6010C |
| Solid | EPA 3550B | Extraction | EPA 8270C |
| Solid | EPA 3550B | Extraction | EPA 8081B |
| Solid | EPA 3550B | Extraction | EPA 8082 |
| Solid | EPA 5030 | Purge/Trap | EPA 8260B/8260C |
| Solid | EPA 5035 | Purge/Trap | EPA 8260B |

STATE OF ILLINOIS

ENVIRONMENTAL PROTECTION AGENCY NELAP - RECOGNIZED ENVIRONMENTAL LABORATORY ACCREDITATION

is hereby granted to

ARDL, INC. 400 AVIATION DRIVE, P.O. BOX 1566 MT. VERNON, IL 62864 NELAP ACCREDITED

ACCREDITATION NUMBER #100308



According to the Illinois Administrative Code, Title 35, Subtitle A, Chapter II, Part 186, ACCREDITATION OF LABORATORIES FOR DRINKING WATER, WASTEWATER AND HAZARDOUS WASTES ANALYSIS, the State of Illinois formally recognizes that this laboratory is technically competent to perform the environmental analyses listed on the scope of accreditation detailed below.

The laboratory agrees to perform all analyses listed on this scope of accreditation according to the Part 186 requirements and acknowledges that continued accreditation is dependent on successful ongoing compliance with the applicable requirements of Part 186. Please contact the Illinois EPA Environmental Laboratory Accreditation Program (IL ELAP) to verify the laboratory's scope of accreditation and accreditation status. Accreditation by the State of Illinois is not an endorsement or a guarantee of validity of the data generated by the laboratory.

Celeste M. Crowley Acting Manager

Environmental Laboratory Accreditation Program

('elaste M('nowley

John South Accreditation Officer

Environmental Laboratory Accreditation Program

John D. South

Certificate No.: 004357

Expiration Date: 04/30/2019 Issued On: 03/22/2018

Awards the Certificate of Approval to:

ARDL, Inc. 400 Aviation Drive, P.O. Box 1566 Mt. Vernon, IL 62864

According to the Illinois Administrative Code, Title 35, Subtitle A, Chapter II, Part 186, ACCREDITATION OF LABORATORIES FOR DRINKING WATER, WASTEWATER AND HAZARDOUS WASTES ANALYSIS, the State of Illinois formally recognizes that this laboratory is technically competent to perform the environmental analyses listed on the scope of accreditation detailed below.

Certificate No.:

004357

The laboratory agrees to perform all analyses listed on this scope of accreditation according to the Part 186 requirements and acknowledges that continued accreditation is dependent on successful ongoing compliance with the applicable requirements of Part 186. Please contact the Illinois EPA Environmental Laboratory Accreditation Program (IL ELAP) to verify the laboratory's scope of accreditation and accreditation status. Accreditation by the State of Illinois is not an endorsement or a guarantee of validity of the data generated by the laboratory.

FOT Name: Non Potable Water, Inorganic

Method: USEPA200.7,1994

Matrix Type: NPW/SCM

Aluminum Antimony
Arsenic Barium
Beryllium Boron
Cadmium Chromium Cobalt
Copper Iron

Lead Magnesium
Manganese Nickel
Potassium Selenium
Silver Sodium
Thallium Vanadium

Zinc

Method: USEPA300.0R2.1,1993

Matrix Type: NPW

Chloride Fluoride

Nitrate Orthophosphate

Sulfate

FOT Name: Non Potable Water, Organic

Method: USEPA608

Matrix Type: NPW

4,4'-DDD 4,4'-DDE
4,4'-DDT Aldrin
alpha-BHC beta-BHC
delta-BHC Dieldrin
Endosulfan I Endosulfan II

Endodinan

Endosulfan sulfate Endrin

Endrin aldehyde gamma-BHC (Lindane)

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Awards the Certificate of Approval

ARDL, Inc.

400 Aviation Drive, P.O. Box 1566

Mt. Vernon, IL 62864

FOT Name: Non Potable Water, Organic Method: USEPA608

Matrix Type:NPWHeptachlorHeptachlor epoxideMethoxychlor

Method: USEPA624

Matrix Type: NPW

1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane

Certificate No.:

004357

1,1,2-Trichloroethane1,1-Dichloroethane1,1-Dichloroethene1,2-Dichlorobenzene1,2-Dichloroethane1,2-Dichloropropane1,3-Dichlorobenzene1,4-Dichlorobenzene

Acrylonitrile Benzene
Bromodichloromethane Bromoform

Bromomethane Carbon tetrachloride
Chlorobenzene Chloroethane

Chloroform Chloromethane

cis-1,3-Dichloropropene Dibromochloromethane

Dichloromethane (Methylene chloride)

Methyl tert-butyl ether (MTBE)

Tetrachloroethene

Toluene trans-1,2-Dichloroethene

trans-1,3-Dichloropropene Trichloroethene

Trichlorofluoromethane Vinyl chloride

Xylenes (total)

Method: USEPA625

Matrix Type: NPW

1,2,4-Trichlorobenzene1,2-Dichlorobenzene1,3-Dichlorobenzene1,4-Dichlorobenzene2,2-Oxybis (2-chloropropane)2,4,5-Trichlorophenol2,4,6-Trichlorophenol2,4-Dichlorophenol

2,4-Dimethylphenol 2,4-Dinitrophenol

2,4-Dinitrotoluene (2,4-DNT) 2,6-Dinitrotoluene (2,6-DNT)

2-Chloronaphthalene2-Chlorophenol2-Methyl-4,6-dinitrophenol2-Nitrophenol

3,3'-Dichlorobenzidine4-Bromophenyl phenyl ether4-Chloro-3-methylphenol4-Chlorophenyl phenyl ether

4-Nitrophenol Acenaphthene

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Awards the Certificate of Approval

ARDL, Inc.

400 Aviation Drive, P.O. Box 1566

Benzyl butyl phthalate

Mt. Vernon, IL 62864

FOT Name: Non Potable Water, Organic Method: USEPA625

Matrix Type: NPW Acenaphthylene

Anthracene
Benzo(a)pyrene
Benzo(g,h,i)perylene
Benzo(g,h,i)perylene
Benzo(k)fluoranthene

Certificate No.:

Bis(2-chloroethoxy) methane

004357

Bis(2-chloroethyl) ether

Chrysene

Diethyl phthalate

Dimethyl phthalate

Dimethyl phthalate

Di-n-butyl phthalate

Di-n-octyl phthalate

Di-n-octyl phthalate

Fluoranthene Fluorene

Hexachlorobenzene Hexachlorobutadiene
Hexachlorocyclopentadiene Hexachloroethane

Indeno(1,2,3-cd) pyrene Isophorone
Naphthalene Nitrobenzene

N-Nitrosodimethylamine N-Nitrosodi-n-propylamine

N-Nitrosodiphenylamine Pentachlorophenol

Phenanthrene Phenol

Pyrene

FOT Name: Solid and Chemical Materials, Inorganic

Method: 1311

Matrix Type: NPW/SCM

TCLP (Organic and Inorganic)

Method: 6010B

Matrix Type: NPW/SCM

Aluminum Antimony
Arsenic Barium
Beryllium Boron
Cadmium Calcium
Chromium Cobalt
Copper Iron

Lead Magnesium

Manganese Nickel

Potassium Selenium

Silver Sodium

Thursday, March 22, 2018 Page 4 of 10

State of Illinois Certificate No.: 004357

Environmental Protection Agency

Awards the Certificate of Approval

ARDL, Inc.

400 Aviation Drive, P.O. Box 1566

Mt. Vernon, IL 62864

FOT Name: Solid and Chemical Materials, Inorganic Method: 6010B

 Matrix Type:
 NPW/SCM
 Strontium

 Thallium
 Vanadium

Zinc

Method: 6010C

Matrix Type: NPW/SCM

Aluminum Antimony
Arsenic Barium
Beryllium Boron
Cadmium Calcium
Chromium Cobalt
Copper Iron

Lead Magnesium
Manganese Nickel
Potassium Selenium
Silver Sodium
Thallium Vanadium

Zinc

Method: 7470A

Matrix Type: NPW/SCM

Mercury

FOT Name: Solid and Chemical Materials, Organic

Method: 8081B

Matrix Type: NPW/SCM

4,4'-DDD 4,4'-DDT Aldrin

alpha-BHC alpha-Chlordane beta-BHC delta-BHC

Dieldrin Endosulfan I

Endosulfan II Endosulfan sulfate
Endrin Endrin aldehyde

Endrin ketone gamma-BHC (Lindane)

gamma-Chlordane Heptachlor
Heptachlor epoxide Methoxychlor

Method: 8082

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Awards the Certificate of Approval

ARDL, Inc.

400 Aviation Drive, P.O. Box 1566

Mt. Vernon, IL 62864

| OT Name: Solid and Chemical Materials, Organic | Method: 8082 |
|--|--|
| Matrix Type: NPW/SCM | |
| PCB-1016 | PCB-1221 |
| PCB-1232 | PCB-1242 |
| PCB-1248 | PCB-1254 |
| PCB-1260 | |
| Method: 8260B | |
| Matrix Type: NPW/SCM | |
| 1,1,1,2-Tetrachloroethane | 1,1,1-Trichloroethane |
| 1,1,2,2-Tetrachloroethane | 1,1,2-Trichloroethane |
| 1,1-Dichloroethane | 1,1-Dichloroethene |
| 1,1-Dichloropropene | 1,2,3-Trichlorobenzene |
| 1,2,3-Trichloropropane | 1,2,4-Trichlorobenzene |
| 1,2,4-Trimethylbenzene | 1,2-Dibromo-3-chloropropane (DBCP) |
| 1,2-Dibromoethane (EDB) | 1,2-Dichlorobenzene |
| 1,2-Dichloroethane | 1,2-Dichloropropane |
| 1,3,5-Trimethylbenzene | 1,3-Dichlorobenzene |
| 1,3-Dichloropropane | 1,4-Dichlorobenzene |
| 2,2-Dichloropropane | 2-Butanone (Methyl ethyl ketone, MEK) |
| 2-Chlorotoluene | 2-Hexanone |
| 4-Chlorotoluene | 4-Methyl-2-pentanone (Methyl isobutyl ketone, MI |
| Acetone | Acrylonitrile |
| Benzene | Bromobenzene |
| Bromochloromethane | Bromodichloromethane |
| Bromoform | Bromomethane |
| Carbon disulfide | Carbon tetrachloride |
| Chlorobenzene | Chlorodibromomethane (Dibromochloromethane) |
| Chloroethane | Chloroform |
| Chloromethane | cis-1,2-Dichloroethene |
| cis-1,3-Dichloropropene | Dibromomethane |
| Dichlorodifluoromethane | Dichloromethane (Methylene chloride) |
| Ethylbenzene | Hexachlorobutadiene |
| Isopropylbenzene | m&p-xylene |
| Methyl-t-butyl ether | Naphthalene |
| n-Butylbenzene | n-Propylbenzene |
| o-Xylene | p-Isopropyltoluene |
| | |

Certificate No.: 004357

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Awards the Certificate of Approval

ARDL, Inc.

400 Aviation Drive, P.O. Box 1566

Mt. Vernon, IL 62864

FOT Name: Solid and Chemical Materials, Organic Method: 8260B

Matrix Type: NPW/SCM sec-Butylbenzene

Styrene tert-Butylbenzene

Tetrachloroethene Toluene

trans-1,2-Dichloroethene trans-1,3-Dichloropropene
Trichloroethene Trichlorofluoromethane

Certificate No.:

004357

Vinyl chloride Xylenes (Total)

Method: 8260C

Matrix Type: NPW/SCM

1,3-Dichloropropane

Chloroethane

1,1,1,2-Tetrachloroethane 1,1,1-Trichloroethane

1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane

1,1-Dichloroethane 1,1-Dichloroethene

1,1-Dichloropropene 1,2,3-Trichlorobenzene

1,2,3-Trichloropropane 1,2,4-Trichlorobenzene

1,2,4-Trimethylbenzene 1,2-Dibromo-3-chloropropane

1,2-Dibromoethane 1,2-Dichlorobenzene

1,2-Dichloroethane 1,2-Dichloropropane

1,3,5-Trimethylbenzene 1,3-Dichlorobenzene

2,2-Dichloropropane 2-Butanone (MEK)

2-Chlorotoluene 2-Hexanone

4-Chlorotoluene 4-Methyl-2-pentanone (MIBK)

1,4-Dichlorobenzene

Chloroform

Acetone Acrylonitrile

Benzene Bromobenzene

Bromochloromethane Bromodichloromethane

Bromoform Bromomethane

Carbon disulfide Carbon tetrachloride
Chlorobenzene Chlorodibromomethane

Chloromethane cis-1,2-Dichloroethene

cis-1,3-DichloropropeneDibromomethaneDichlorodifluoromethaneEthylbenzene

Hexachlorobutadiene Isopropylbenzene

m&p-xylene Methyl tert-butyl ether (MTBE)

Methylene chloride Naphthalene
n-Butylbenzene n-Propylbenzene

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Awards the Certificate of Approval

ARDL, Inc.

400 Aviation Drive, P.O. Box 1566

Mt. Vernon, IL 62864

FOT Name: Solid and Chemical Materials, Organic Method: 8260C

Matrix Type: NPW/SCM o-Xylene

p-Isopropyltoluene sec-Butylbenzene
Styrene tert-Butylbenzene

Tetrachloroethene Toluene

trans-1,2-Dichloroethene trans-1,3-Dichloropropene
Trichloroethene Trichlorofluoromethane

Certificate No.:

004357

Vinyl chloride Xylenes (total)

Method: 8270C

Matrix Type: NPW/SCM

Di-n-butyl phthalate

1,2,4,5-Tetrachlorobenzene1,2,4-Trichlorobenzene1,2-Dichlorobenzene1,2-Diphenylhydrazine1,3-Dichlorobenzene1,4-Dichlorobenzene2,2-Oxybis (1-chloropropane)2,4,5-Trichlorophenol2,4,6-Trichlorophenol2,4-Dichlorophenol2,4-Dimethylphenol2,4-Dinitrophenol

2,4-Dinitrotoluene (2,4-DNT) 2,6-Dinitrotoluene (2,6-DNT)

2-Chloronaphthalene 2-Chlorophenol

2-Methylnaphthalene 2-Methylphenol (o-Cresol)

2-Nitroaniline 2-Nitrophenol
3,3'-Dichlorobenzidine 3-Nitroaniline

4,6-Dinitro-2-methylphenol 4-Bromophenyl phenyl ether

4-Chloro-3-methylphenol 4-Chloroaniline

4-Chlorophenyl phenyl ether 4-Methylphenol (p-Cresol)

4-Nitrophenol

Acenaphthene

Anthracene

Benzo(a)anthracene

Benzo(a)pyrene

Benzo(g,h,i)perlyene

Benzoic acid

4-Nitrophenol

Acenaphthylene

Benzo(a)anthracene

Benzo(b)fluoranthene

Benzo(k)fluoranthene

Benzoic acid

Bis(2-chloroethoxy) methane Bis(2-chloroethyl) ether

Bis(2-ethylhexyl) phthalate Butyl benzyl phthalate

Carbazole Chrysene

Dibenz(a,h)anthracene Dibenzofuran

Diethyl phthalate Dimethyl phthalate

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Di-n-octyl phthalate

Awards the Certificate of Approval

ARDL, Inc.

400 Aviation Drive, P.O. Box 1566

Mt. Vernon, IL 62864

FOT Name: Solid and Chemical Materials, Organic Method: 8270C

Matrix Type: NPW/SCM Fluoranthene

Fluorene Hexachlorobenzene

Hexachlorobutadiene Hexachlorocyclopentadiene

Certificate No.:

004357

Hexachloroethane Indeno(1,2,3-cd) pyrene

Isophorone Naphthalene

Nitrobenzene N-Nitrosodimethylamine

N-Nitrosodi-n-propylamine N-Nitrosodiphenylamine

Pentachlorophenol Phenanthrene

Phenol Pyrene

Pyridine

Method: 8270D

Matrix Type: NPW/SCM

1,2,4,5-Tetrachlorobenzene 1,2,4-Trichlorobenzene

1,2-Dichlorobenzene 1,2-Diphenylhydrazine

1,3-Dichlorobenzene 1,4-Dichlorobenzene

2,2-Oxybis (1-chloropropane) 2,4,5-Trichlorophenol

2,4,6-Trichlorophenol 2,4-Dichlorophenol

2,4-Dimethylphenol 2,4-Dinitrophenol

2,4-Dinitrotoluene (2,4-DNT) 2,6-Dinitrotoluene (2,6-DNT)

2-Chloronaphthalene 2-Chlorophenol

2-Methylnaphthalene 2-Methylphenol (o-Cresol)

2-Nitroaniline 2-Nitrophenol

3,3'-Dichlorobenzidine 3-Nitroaniline

4,6-Dinitro-2-methylphenol 4-Bromophenyl phenyl ether

4-Chloro-3-methylphenol 4-Chloroaniline

4-Chlorophenyl phenyl ether 4-Methylphenol (p-Cresol)

4-Nitroaniline 4-Nitrophenol

Acenaphthene Acenaphthylene

Anthracene Benzo(a)anthracene

Benzo(a)pyrene Benzo(b)fluoranthene

Benzo(g,h,i)perlyene Benzo(k)fluoranthene

Benzoic acid Benzyl alcohol

Bis(2-chloroethoxy) methane Bis(2-chloroethyl) ether

Bis(2-chloroethyl) phthalate Butyl benzyl phthalate

Carbazole Chrysene

Thursday, March 22, 2018 Page 9 of 10

Awards the Certificate of Approval

ARDL, Inc.

400 Aviation Drive, P.O. Box 1566

Mt. Vernon, IL 62864

FOT Name: Solid and Chemical Materials, Organic Method: 8270D

Matrix Type: NPW/SCM Dibenz(a,h)anthracene

Certificate No.:

004357

Dibenzofuran Diethyl phthalate
Dimethyl phthalate Di-n-butyl phthalate

Di-n-octyl phthalate Fluoranthene

Fluorene Hexachlorobenzene

Hexachlorobutadiene Hexachlorocyclopentadiene
Hexachloroethane Indeno(1,2,3-cd) pyrene

Isophorone Naphthalene

Nitrobenzene N-Nitrosodimethylamine
N-Nitrosodi-n-propylamine N-Nitrosodiphenylamine

Pentachlorophenol Phenanthrene

Phenol Pyrene

Pyridine

Method: 8330

Matrix Type: NPW/SCM

1,3,5-Trinitrobenzene (1,3,5-TNB) 1,3-Dinitrobenzene (1,3-DNB)

2,4,6-Trinitrotoluene (2,4,6-TNT) 2,4-Dinitrotoluene (2,4-DNT)

2,6-Dinitrotoluene (2,6-DNT) 2-Amino-4,6-dinitrotoluene (2-Am-DNT)

4-Amino-2,6-dinitrotoluene (4-Am-DNT) Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)

Methyl-2,4,6-trinitrophenylnitramine (Tetryl) m-Nitrotoluene (3-Nitrotoluene, 3-NT)

Nitrobenzene Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HM

o-Nitrotoluene (2-Nitrotoluene, 2-NT) p-Nitrotoluene (4-Nitrotoluene, 4-NT)

Method: 8330A

Matrix Type: SCM

1,3-Dinitrobenzene (1,3-DNB)

2,4,6-Trinitrotoluene (2,4,6-TNT) 2,4-Dinitrotoluene (2,4-DNT)

2,6-Dinitrotoluene (2,6-DNT) 2-Amino-4,6-dinitrotoluene (2-Am-DNT)

2-Nitrotoluene (2-NT)

4-Amino-2,6-dinitrotoluene (4-Am-DNT)

4-Nitrotoluene (4-NT)

Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)

Methyl-2,4,6-trinitrophenylnitramine (Tetryl)

Nitrobenzene Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine(HMX

Thursday, March 22, 2018 Page 10 of 10

APPENDIX C - FORMS

| | REPORT NUMBER | | |
|--|-------------------------------|-----------------|--|
| CONTRACTORS QUALITY CONTROL REPO | KEI OKI NOWBEK | Page 1 of 2 | |
| DAILY LOG OF CONSTRUCTION | | DATE | |
| PROJECT | | CONTRACT NUMBER | |
| CONTRACTOR | WEATHER | | |
| | | | |
| QC NARRATIVES | | | |
| Activities in Progress: | | | |
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| | | | |
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| | | | |
| Materials Delivered: | | | |
| | | | |
| General Comments: | | | |
| | | | |
| PREP MEETING: | | | |
| INITIAL INSPECTION: | | | |
| THIS IS INC. | | | |
| Safety Inspection / Safety Meetings: | | | |
| Caroty mopositon / Caroty mootinger | | | |
| | | | |
| | | | |
| PREP/INITIAL DATES (Preparatory and initial dates held and ad | | | |
| A preparatory inspection was held today for the following | feature: | | |
| An initial inspection was held today for the following featu | re: | | |
| | | | |
| ACTIVITY START/FINISH | | | |
| The following activity was started today: Activity No Description | | | |
| | | | |
| No activities were finished today | | | |
| QC REQUIREMENTS | | | |
| | | | |
| QA/QC DEFICIENCY (Describe QC Deficiency items issued, R | eport QC and QA Deficiency it | ems corrected) | |
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| CONTRACTORS QUALITY CONTROL REPORT (QCR) | | REPOR | REPORT NUMBER Page 2 of 2 | | | | | | | |
|--|-------------------------------|---------------------|---------------------------|---------------|--|--|--|--|--|--|
| DAILY LOG OF CONSTRUCTIO | N | DATE | | | | | | | | |
| PROJECT | | CONTE | RACT NUMBER | | | | | | | |
| CONTRACTORS ON SITE (Report first and/or last day of | ontractors were on site) | | | | | | | | | |
| LABOR HOURS | | | | | | | | | | |
| The following labor hours were Reported today: | | | Number of | Hours | | | | | | |
| Employer Labor Classification | | | Employees | Worked | | | | | | |
| | | | | | | | | | | |
| Total hours worked to date: | | Total | | | | | | | | |
| EQUIPMENT HOURS | | | | | | | | | | |
| The following equipment hours were Reported t | oday: | | ldle | Operating | | | | | | |
| Serial Number Description | | | Hours | Hours | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | Total | | | | | | | | |
| Total operating hours to date: | | Total | | | | | | | | |
| ACCIDENT REPORTING (Describe accidents) | | | | | | | | | | |
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| CONTRACTOR CERTIFICATION On behalf of the contrac | ctor, I certify that this Rej | oort is complete an | d correct and all | equipment and | | | | | | |
| | performed during this F | | | | | | | | | |
| | s, to the best of my know | | | | | | | | | |
| QC REPRESENTATIVE'S SIGNATURE | DATE | SUPERINTENDENT'S II | NITIALS | DATE | | | | | | |

| | RMS SUBMITTAL REGISTER INPUT FORM | | | | | | | | | CONT | RACT | NUMBE | R | | | | | | | | DELIV | ERY OR | DER | | | |
|---|-----------------------------------|-------------------------------|------------------------|--------------------|-------------------|-------------------|------------------|-------------------|-------------------|------------------------|------------------------|---------------|------------|----------------------------|--------------------------|----------------------------------|-------------------------|-------|-------|----------------------|------------------|----------------------|---------------------|---|--|--|
| TITLE AND LOCATION | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Button <right click="" for="" instructions<="" th=""><th colspan="7">TYPE OF SUBMITTAL</th><th colspan="4">ITTAL</th><th colspan="6">CLASSIFICATION</th><th colspan="4">REVIEWING OFFICE</th></right> | | | | | | TYPE OF SUBMITTAL | | | | | | | ITTAL | | | | CLASSIFICATION | | | | | | REVIEWING OFFICE | | | |
| SECTION | PARAGRAPH NUMBER | DESCRIPTION OF ITEM SUBMITTED | 01 - PRECON SUBMITTALS | 02 - SHOP DRAWINGS | 03 - PRODUCT DATA | 04 - SAMPLES | 05 - DESIGN DATA | 06 - TEST REPORTS | 07 - CERTIFICATES | 08 - MFRS INSTRUCTIONS | 09 - MFRS FIELD REPORT | 10 - O&M DATA | 12 - OTHER | FIO - FOR INFORMATION ONLY | GA - GOVERNMENT APPROVED | DA - DESIGNER OF RECORD APPROVAL | CR - CONFORMANCE REVIEW | DA/CR | DA/GA | DO - DISTRICT OFFICE | AO - AREA OFFICE | RO - RESIDENT OFFICE | PO - PROJECT OFFICE | DR - DESIGNER OF RECORD AE - ARCHITECT / ENGINEER | | |
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| D-: | a of loans offe | | | | | | Erosioı | n Control Inspec | tion F | ₹еро | rt |
| | e of Inspection: | | | | | County: | | | | | |
| | ne of Inspector: | | -1-1- F | <u> </u> | | Section: | - | | | | |
| туре | e of Inspection: | | ekly 🗆 | | | Route: | _ | | | | |
| Con | | >0.5" Pre | • | · — | | District: Contract I | | | | | |
| Sub | <u>-</u> | | | | | Job No. | | | | | |
| Oub. | <u> </u> | | | | | Project: | | | | | |
| NPD | DES/ESC Defici | iency De | duction: | \$ | | , NPDES P | | | | | |
| Tota | I Disturbed Are | ea: | | acre | | Ready for | · Final Co | ver: | | acre | |
| | | | | | | | | shed: | | acre |) |
| Eros | sion and Sedir | ment Co | ntrol Pra | ctices | | | | | | | |
| ltem | #/BMP | | | | | | | | YES | NO | N/A |
| 1. | - p | ermaner | itly ceas | posed areas where ed, and not permand in accordance with | ently stabiliz | ed, have | adequate | temporary seed or | | | |
| 2. | | | | sting and temporary) adequate stabilizati | | | | | | | |
| 3. | Perimeter Ero | osion Ba | rrier: | Are all perimeter e Has perimeter barr stabilized? | | | | order? noved and the area | | | |
| 4. | Temporary D | itch Che | cks: | Are all temporary of Are the current dito | | | | | | | |
| 5. | Temp Diversi Slope Drains | | Are all Te | emporary Diversions | s and Slope I | Drains fur | nctioning | oroperly? | | | |
| 6. | Inlet Protection | | | nlet protection device nlet filters less than | | | | ed? | | | |
| 7. | Sediment Basins/Traps | | | sediment basins/trap ficient capacity exist | | | | nt? | | | |
| 8. | Areas of Inte | H | las the o | Prairie/Tree Preserventractor remained of intrusion" areas ac | clear of all d | | | | | | |
| 9. | Stock Piles: | | | es properly situated ed | | | | | | | |
| 10. | Borrow/Was Sites: | te | | borrow and waste I empliance with NPD | | | ose locat | ed offsite, in | | | |
| 11. | Other Installa | ations: | | l other BMP installatote in comments) | tions shown | in the pla | ns prope | rly functioning? | | | |
| Gen | eral Site Main | tenance | Require | d of the Permit | | | | | | | |
| 12. | Vehicle Tracking: | road Are Sta | d areas t pilized C | om mud, sediment a hroughout the site? onstruction field ent onstruction field ent | trances prop | erly locate | ed? | | | | |

| Item | #/BMP | | | YES | NO | N/A | | | | |
|---|---|--|--|-----|----|-----|--|--|--|--|
| 13. | Concrete Washout Are | | Are concrete washout areas adequately signed and maintained? Has all washout occurred only at designated washout locations? | | | | | | | |
| 14. | Staging/Storage Areas | | Are all staging/storage facilities free of litter, leaking containers, leaking equipment, spills, etc? | | | | | | | |
| 15. | Fuel/Chemical Storage | | s and chemicals stored only in designated locations? gnated locations free of evidence of leaks and or spills? | | | | | | | |
| 16. | Previous Inspection Follow Up: | | rrections from the last report been properly completed? a NPDES/ESC Deficiency Deduction been assessed? | | | | | | | |
| 17. | Update SWPPP: Hav | ve all changes to t signed and dated | he projects SWPPP been noted on the graphic site plan, ? | | | | | | | |
| 18. Off-site Has sediment or other pollutants of concern been released from the project site? Dischare of If Yes, has the Illinois Environmental Protection Agency been notified within 24 hours | | | | | | | | | | |
| | | ur observation of the distribution of the dist | ne discharge and an Incidence of Non-Compliance (ION) | | | | | | | |
| Spec | ific Instructions Related | d to "No" Answe | rs From Above: | | | | | | | |
| Item | # Station or Station | Practice | ractice Comments/Actions Required | | | | | | | |
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| Othe | r Comments: | | | | | | | | | |
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| | | | | | | | | | | |
| Addi | tional Pages (Attached | As Needed) | | | | | | | | |
| | Outfalls / Receiving Wate Drainage Structure/Ditch Additional Instructions to | Check Locations | Other: | | | | | | | |
| Repa | irs and stabilization are to | o be completed wi | thin 24 hours of this report (or as indicated above) or the DAlessed for each noted deficiency until the required action is compared to the contract of the part of the contract of the part of the part of the contract of th | | d. | | | | | |
| Inspe | ector's Signature | | Date/Time: | | | | | | | |
| Cont | Contractor's Signature Date/Time: | | | | | | | | | |